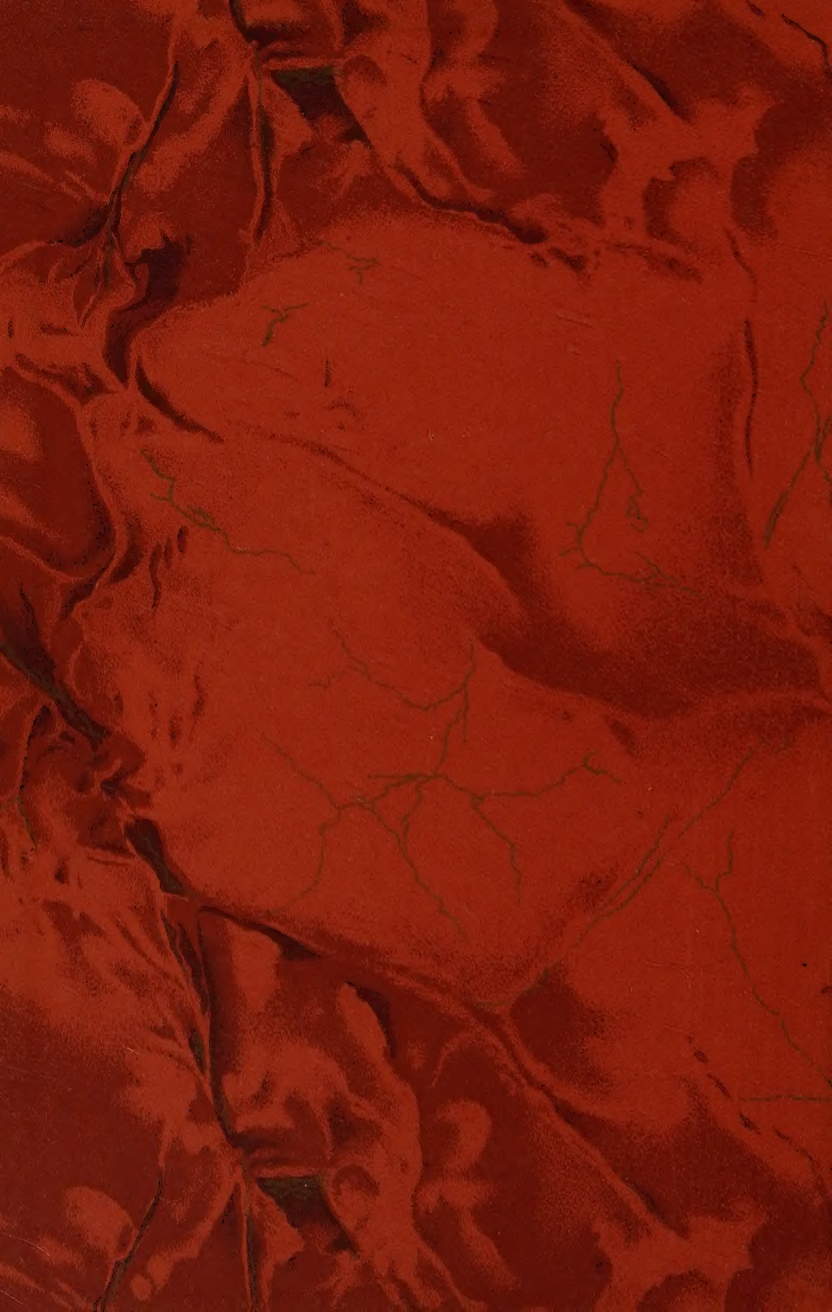
INTERIOR WALL DECORATION

Plain and Decorative Finishes
Practical Working Methods

VANDERWALKER



Mamie Pedersen

BOOKS

of interest to

Painters, Decorators *and* Designers

By F. N. Vanderwalker

Interior Wall Decoration
The Mixing of Colors and Paints
Wood Finishing—Plain and Decorative
House Painting Methods
Automobile Painting
Estimates, Costs and Profits
New Stencils and Their Use

By F. H. Atkinson

The Art of Sign Painting
A Show at Sho' Cards
Scene Painting and Bulletin Art

By C. J. and L. S. Strong

Strong's Book of Designs
The Art of Show Card Writing

By F. Maire

Modern Painter's Cyclopedia

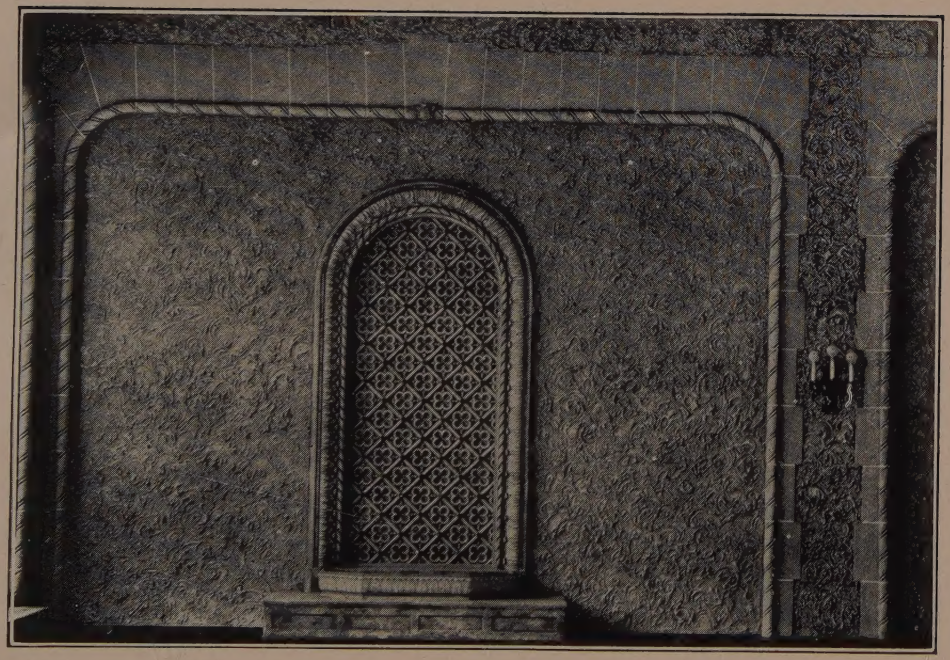
By F. Delamotte

The Signist's Book of Alphabets
The Amateur Artist

By Bart

Chalk Talk and Crayon Presentation

FREDERICK J. DRAKE & CO.
PUBLISHERS



A Very Ornate Use of a Plastic Paint Trimmed with French Caen Stone.
The Texture Was Worked In with the Fingers.

INTERIOR WALL DECORATION

Practical Working Methods for Plain and Decorative Finishes, New and Standard Treatments

The New Artistic and the Novelty Finishes; Color Stippling; Glaze Colors, Tiffany Blending and Mottling; Spatter Work; Plaster Staining; Sand Float; Sponge-Stipple; Spanish Palm Finish; Roman Travertine; Old English; Holland; French Caen Stone; Italian Plaster and Other Artistic Rough Textures; Decorative Wall Panels

Plain Painting Jobs and Calcimining Methods; Preparing the Surfaces; Hanging Wall Fabrics

BY

F. N. VANDERWALKER

Graduate in Commerce, Northwestern University
Editor, *American Painter & Decorator*
Author of "The Mixing of Colors and Paints"; "Estimates, Costs and Profits"; "New Stencils and Their Use"; "Automobile Painting"

ILLUSTRATED

CHICAGO
FREDERICK J. DRAKE & CO.
PUBLISHERS

COPYRIGHT, 1924
BY
FREDERICK J. DRAKE & CO.

PRINTED IN THE UNITED STATES OF AMERICA

PREFACE

There has been a genuine need for presentation of the general and inspirational phases of interior decoration. It is being well done.

The author believes it is now vitally important that specific information be recorded about definite working methods in everyday use by decorators. It is one thing to paint word pictures of beautiful interiors and enthuse about the obvious need for more artistic handling of the interior decorations in our homes and public buildings, but it is quite another to provide essential information in such form as will teach those who are young in experience how actually to produce the more artistic interiors so much desired by all. The love of the beautiful is inherently a part of all human natures. To gain self expression in an artistic manner is a slow process, but much more rapid progress will be noted when more definite information in an easily understood form is available.

The shelves of our book stores offer numerous excellent works of great interest on various phases of interior decoration—books on period furniture, rugs, drapes, accessories, architecture of interiors, grouping and arrangement of furnishings, color treatment and textures for wall decoration, but none with which the author has come in contact leaves the sphere of generalities to become specific in presenting definite information about methods, materials and tools essential to produce artistic, decorative wall treatments.

Now it is always much safer and easier to write in terms of generalities. When one becomes specific it

opens up opportunities without number for criticism, because what is true about one particular job may not be true about others.

However, if the author has succeeded in this work in his plan to give all necessary detailed information about a few jobs, the student decorator will gain a foundation knowledge which will carry him on to creative work on his own account. For that reason actual jobs have been described and illustrated, jobs done by decorators in the field today and for which customers have paid current prices.

The information recorded in this book, it is hoped, will be of practical use to artists and craftsmen; to interior decorators who know the æsthetic phase of their profession but need more of the practical; to practical decorators and house painters who wish to extend the scope of their work, and to all who know the many beautiful decorative wall treatments, new and standard, but who lack information about methods, materials and tools needed to produce them.

It is hoped, also, that this book will be of interest to householders who are building new homes, or considering the redecoration of their present homes, because so many of the decorative textures and color effects presented here are in the hands of professional decorators, but not printed and illustrated elsewhere.

F. N. VANDERWALKER

CONTENTS

CHAPTER I — PAGE

The Appeal of Artistic Wall Treatments.—The Market for Simple, Colorful Textures.—The Market for Novelty and Bizarre Effects 19

CHAPTER II

RELATION OF WALLS TO FURNISHINGS:—Walls Furnish a Background. — Correlating Walls, Floors, Trim and Ceiling.—Colors and Textures.—Color Schemes 25

CHAPTER III

PROCEDURE IN DECORATING:—Cleaning Up the Place.—Drop Cloths.—Scaffold and Equipment.—Procedure for Coating in Walls 55

CHAPTER IV

PREPARATION OF SURFACES:—New Smooth Finish Plaster.—Old Smooth Finish Plaster.—New Rough Finish Plaster.—Old Rough Finish Plaster.—New Wall Board Walls.—Old Wall Board Walls.—Old Painted Walls.—Concrete and Brick Walls.—Washing Walls.—Removing Old Wall Paper.—Removing Old Calcimine.—Removing Gloss Oil Size.—Scaling Paint.—Pasting Back Fabrics.—Cleaning, Cutting Out Cracks and Holes in Plaster Walls.—Filling Cracks and Holes.—Putty Mixing and Use.—Filling Wall Board Joints.—Covering Surface Scratches and Fire Cracks.—Stains and Discolorations .. 59

CHAPTER V

WALL SIZING MATERIALS:—Prepared Sizes.—Glue Size.—Varnish Size.—Soap, Glue and Oil Size.—Sugar Size 81

CHAPTER VI

PLAIN PAINTING AND ENAMELING:—Prepared Materials.—Mixing Proportions.—Correct Brushing Methods for Flat Paints and Enamels.—Stippling Paint.—Gloss and Flat Patches.—Starch Coating Walls.—Enameling on Plaster and Canvas.—Ground Coats.—Under Coats.—Flat, Semi-Flat and Gloss.—Tinting and Colored Enamels 85

CHAPTER VII PAGE

CALCIMINE METHODS AND MATERIALS:—Prepared Materials.—Calcimine Pigments, Binders and Colors.—Mixing Calcimine.—Brushing Calcimine.—Calcimine on New Walls.—Calcimine on Old Walls.—Topping Over Calcimine.....117

CHAPTER VIII

RADIATOR PAINTING AND DECORATING:—Cleaning.—Plain Painting.—Bronzing.—Glazing, Mottling and Blending...133

CHAPTER IX

STAINING ROUGH PLASTER WALLS:—Materials Needed.—Tools.—Methods 141

CHAPTER X

TIFFANY GLAZING, MOTTLING AND BLENDING:—Effects Wanted.—Materials Needed.—Tools Used.—Ground Coats.—Stippling.—Stencil Outline.—Glazing Liquids.—Simple Two-Color Schemes.—Three-Color Glazing.—Graduated Blend.—The Finishing Touches.—When Glaze Color Runs.—When Glaze Color Sets Before Blending.—Suggested Color Schemes.—Silk Glazed Effects.....143

CHAPTER XI

SAND-FLOAT FINISH:—Where Used.—Texture Wanted.—Materials.—Tools.—Methods.—Color Treatment 193

CHAPTER XII

SPONGE-STIPPLE WALL FINISHES:—Effect Wanted.—Done with Calcimine.—Done with Oil Paint.—Tools.—Methods.205

CHAPTER XIII

SPATTER WALL FINISH:—Effect Wanted.—Materials.—Tools.—Methods 219

CHAPTER XIV

BRONZE VERNIS MARTIN AND METALLIC FINISHES:—Effect Wanted.—Materials.—Tools and Equipment.—Methods..233

CHAPTER XV

HISTORIC AND NEW ROUGH WALL TEXTURES:—Decorative Wall Finishes in History.—Textone.—Craftex.—Decorite.—Compostipl.—Stippaleen.—Stuc-O-Tint.—Morene.—Flat Wall Paints.—Swedish Putty.—Italian Gesso.—Holland Plaster Wall Finish.—French Caen Stone.—Old English Plaster.—Early Colonial Plaster.—Spanish Palm Finish.—Wickham Palm Finish.—Roman Travertine.—Italian Plaster Finish.—Roman Tile Finish.—Combed Texture Finishes.—Sponge Stippled Rough Finish Textures.—Finger Rough Textures.—Materials.—Tools.—Methods...241

CHAPTER XVI PAGE

LACE STENCIL WALL FINISH:—Effect Wanted.—Materials.—Colors.—Tools.—Methods 331

CHAPTER XVII

SPRAY-GUN DECORATIVE FINISHES:—Materials.—Handling the Air Gun.—Effects Wanted.....345

CHAPTER XVIII

HANGING AND PAINTING WALL FABRICS:—Descriptions of Fabrics.—Preparing Surfaces.—Tools Needed.—Mixing the Paste.—Placing the Fabric in Place.—Butted or Trimmed Edges.—Filling.—Painting.—Staining.—Repairing Old Fabrics.....389

CHAPTER XIX

DECORATIVE WALL PANELS:—Moulding Shapes.—Tools Needed.—Fastening to Wall.—Corners and Joints.—Laying-Out.—Proportion and Balance.—Decorative Treatment of Panel Centers.....405

CHAPTER XX

LINING AND STRIPING:—Tools Needed.—Materials.—Methods.—Striping and Stencil Wheels.....443

INDEX 447

An Ornate Texture Done with Plastic Paint Manipulated with the Fingers and a Brush

LIST OF ILLUSTRATIONS

FRONTISPIECE.—A Very Ornate Use of a Plastic Paint Trimmed with French Caen Stone. The Texture Was Worked In with the Fingers.

PLATE		PAGE
1	Trestles, Ordinary Plank and Extension Plank	57
2	Cutting Out a Plaster Hole and Filling	70
3	Paint Strainers	93
4	Flat Wall Brush, Metal-Bound	95
5	Leather-Bound Stucco Brush	95
6	The Correct Way to Hold a Brush	98
6A	Another Correct Way to Hold a Brush	100
6B	Working the Brush into the Paint	101
7	The Stippling Brush and How It Is Used	104
7A	Spray Gun Painting Plain Surfaces	105
8	A Dutch Calcimine Brush and an Ordinary Calcimine Brush	125
9	Steel Wire Brushes for Radiator Cleaning	134
10	New Radiator Partly Cleaned for Painting	135
10A	Radiator with One Flat Coat of Paint on It	136
10B	The Job Glazed and Wiped Out for Antique Finish	137
10C	Painting a Radiator with a Spray Gun	139
11	Tools Used for Tiffany Glazing, Mottling and Blending	147
12	Spots of First Color and the Beginning of a Cheese-Cloth Stipple for Tiffany Glazing, Mottling and Blending	155
13	Glazing Color Blended Out with a Stippling Brush	157
13A	Glazing Color Stippled with a Sea-Wool Sponge	159
13B	Glazing Color Stippled with a Wad of Newspaper	161
13C	Glazing Color Stippled with a Wad of Burlap	163
13D	Glazing Color Stippled with a Rubber Sponge	165
13E	Glazing Color Stippled with Cheese-Cloth	167
14	The Wrist Movement for Producing a Circular Texture when Glazing, Mottling and Blending	171
15	Spots of Several Colors as Put On to Begin a Multi-Color Blend	175
16	The Multi-Color Blend Finished	177
17	Horizontal Stripes of Glazing Color as Put On for a Graduated Blend	179
18	The Graduated Blend Finished	181
19	The Type of Diaper Stencil Used for an All-Over Design	191
20	A Sand-Float Finished Wall	195
21	A Close-Up View of the Sand-Float Texture	197
22	Tools Used for Sand-Float Finishing	199
23	The Sand-Float Job Showing Two Different Textures	203
24	A Sponge-Stipple Finish Done with a Sea-Wool Sponge	207
25	The Tools Used for Making Sponge-Stipple Wall Finishes	209
26	The Type of Sea-Wool Sponge Used for Wall Finish	213
27	The Vari-Tone Sponge Roller Used for Wall Finishes	214

PLATE PAGE
28 A Spatter Finish Produced with a Spray Gun. Aluminum Bronze on Top of a Flat Black Ground....221
29 A Spatter Finish with Several Colors Put On with a Spray Gun 223
30 A Spatter Finish in Four Colors Done by Hand with a Four-Inch Flat Wall Brush....225
31 The Same Spatter Finish as Is Shown in Plate 30, but with Only One Color on the Light-Colored Ground..229
32 The Method of Holding and Using the Brush with a Stick for Producing Spatter Finishes....231
33 Tools Used for Producing Rough Texture Wall Finishes 267
34 A General View of Holland Plaster Wall Texture....269
35 A Close-Up View of the Texture of the Holland Plaster Shown in Plate 34....271
36 Close-Up View of French Caen Stone Finish....273
37 A General View of French Caen Stone Finish Marked Off in Blocks....275
38 Old English Plaster Finish as Reproduced with Plastic Paint 277
39 Early Colonial Plaster Produced with Plastic Paint...279
40 Spanish Palm Finish Done with Plastic Paint....283
41 A Palm Finish Produced with Hand Brush....285
42 Close-Up View of Wickham Palm Finish....287
43 A General View of Wickham Palm Finish Used for Panel Centers 290
44 Roman Travertine Finish Marked Off in Blocks....291
45 Close-Up View of Roman Travertine Texture....293
46 General View of Italian Plaster Texture....295
47 Close-Up View of Italian Plaster Texture....297
48 Roman Tile Finish Done with Plastic Paint....299
49 A Brush Texture Done in Plastic Paint Over a Brick Wall. A Sand-Float Finish Was Put On First....301
50 A Close-Up View of the Texture Shown on Plate 49..303
51 A Brushed and Smoothed Texture Produced with Plastic Paint 305
52 A Very Rugged Texture Produced with Plastic Paint Manipulated with a Brush....307
53 An Exceedingly Rough Texture Produced with a Plastic Paint on a Smooth Plaster Wall....311
54 A Close-Up View of the Rough Texture Shown in Plate 53 313
55 A Vertical Line Rough Texture Produced with Plastic Paint and a Steel Wire Brush....315
56 A Close-Up View of the Texture Shown on Plate 55..317
57 A Rough Vertical Texture Produced with Plastic Paint Using a Whiskbroom....319
58 A Conventional Rough Stipple Texture Produced with Plastic Paint and an Ordinary Stippling Brush....321
59 A Rough Texture Representing the Gothic Period, Produced with Plastic Paint. Texture Worked In with a Whiskbroom....323
60 An Interesting Texture Produced by Stippling a Rough Coat of Plastic Paint with an Ordinary Sponge....325
61 A Novelty Texture Produced by Making Finger Prints in a Heavy Coat of Plastic Paint....327

PLATE PAGE
62 An Exceptionally Beautiful Rough Texture Produced by Manipulating a Very Heavy Coat of Plastic Paint with the Fingers....329
63 A Lace-Curtain Stencil Stretched on a Wood Frame and Being Coated with Shellac....333
63A A Lace-Curtain Stencil Transferred in a Moderately Dark Color on a Light-Colored Ground Coat....335
64 Showing the Method of Using a Stippling Brush or a Round Pound Brush for Transferring a Lace Stencil to a Wall in Color....337
64A Another Lace-Curtain Stencil Design Suitable for Wall Panels....339
65 Large Lace-Curtain Stencils May Be Rolled While Being Transferred to the Wall....341
66 The DeVilbiss Spray Gun Showing Round and Fan-Shaped Sprays of Material....346
67 The Paasche Air Brush N. F. 3 (Left). The Willard C. Beach Air Brush A-1....347
67A The Binks Spray Gun No. 105 (Left). The Spray Engineering Company Gun No. P-6....349
67B A Complete Spray Gun Outfit....351
68 A Beautiful Decorative Finish Produced with a Spray Gun....357
69 A Novelty Wall Finish Produced with Lacquer Enamel Put On with a Spray Gun....359
70 An Unusually Beautiful Novelty Texture Suitable for Wall Panels, Put On with a Spray Gun....363
71 An Interesting Wall Finish Produced with a Spray Gun and Plastic Paint....365
72 A Rough Texture Put On with a Spray Gun, Using Thick Flat Wall Paint....367
73 A Very Fine-Grained Stipple Texture, Put On with a Spray Gun....369
74 An Unusual Rough Texture Done in Brown, Green and Gold. The Plastic Paint Was Sprayed On....371
75 A Rather Massive and Rugged Texture Produced with Plastic Paint Put On with a Spray Gun....373
76 A Reproduction of the Stucco Finish Commonly Done with Portland Cement. Produced with Thick Flat Wall Paint Put On with a Spray Gun....375
77 A Rough Texture with an Interesting Pattern Made by Spraying on Flat Wall Paint....379
77A An Interesting Fabric Texture Produced by Spraying Color onto a Smooth Surface and Blending It Out with a Brush....381
77B A Finish Similar to 77A, Except That the Color Was Blended One Way, Instead of Both Ways....383
77C A Spray Gun Finish Produced with Plastic Paint. A Rather Conventional Texture Useful for Panel Centers and Wall Surfaces Below Chair Rails and Plate Rails....385
77D A Finish Similar to That Shown on Plate 77C, but with a Finer Texture....387
78 The Tools Needed for Hanging Wall Fabrics....393
79 Showing How a Plumb-Bob and Line Are Used to Mark a Vertical Line on the Wall....395

PLATE PAGE
80 The Straightedge and How It Is Used....396
81 Hanging a Strip of Canvas....397
82 Trimming Lapped Edges of Fabric. Cutting Through the Lapped Edges to Make a Perfect Joint....401
83 Showing How to Cut Through Old Fabric on a Ceiling or a Wall to Paste Back Loose Areas....404
84 The Various Styles of Mouldings Used for Constructing Wall Panels....409
85 Decorative Corners for Panel Mouldings....410
86 (a) Colonial Cornice and Picture Moulding. (b) Combination Cove and Picture Moulding. (c) Plate Rail. (d) Picture Moulding. (e) Chair Rail....411
87 The Tools Used for Cutting and Fitting Panel Mouldings....412
87A A Spray Gun Being Used to Decorate Paneled Walls.413
88 The Paneled Walls of a Bedroom Showing Electric Light Fixture Relocated Between Panels....415
89 An Attractive Layout of Panel Mouldings in a Bedroom....417
90 Dining Room Walls Paneled Off with Mouldings. The Panel Centers Filled In With Wallpaper....421
91 A Suggested Layout for Wall Panels....423
92 Showing the Manner in Which Wall Panels May Be Artistically Grouped....424
93 A Novelty Layout of Wall Panels in a Black and White Room....425
94 A Simple but Effective Wall Panel Layout Below a Chair Rail and Having Pictorial Wallpaper Above the Panels....426
95 A Living Room Paneled in Conventional Style....427
96 Another Arrangement of Panels on Living Room Walls.428
97 An Interesting Layout of Wall Panels Produced with Mouldings and Wallpaper Centers in a Living Room.429
98 A Layout for the Handling of Wall Panels in a Second-Story Bedroom....430
99 A Very Modern Use of Mouldings. The Mouldings Were Finished in a Very Dark Color and Were Located Just Below the Cornice, Above the Chair Rail and Allowed to Follow Around the Door Casings...431
100 Indicating Some Correct and Incorrect Layouts for Panel Mouldings....432
101 The Miter Box Being Used to Miter the Corner of a Moulding....434
102 Classic Stencil Designs Which May Be Used to Form Wall Panels....437
103 Classic and Conventionalized Flower Designs Suitable for Wall Panels....438
104 Stencil Designs for Use in Forming Wall Panels....440
105 Common Names Used to Designate Various Wall Areas for the Purpose of Decoration....441
106 (a) The Correct Way to Hold an Angle Lining Brush. (b) The Angle Liner and Straightedge in Position to Run a Line. (c) Fresco Angle Liners. (d) A Gilding Wheel. (e) A Striping and Stencil Wheel. (f) The Character of Stripes, Stencil and the Wheels Used to Make Them with a Striping Wheel....444

INTERIOR WALL DECORATION

CHAPTER I

THE APPEAL OF ARTISTIC WALL TREATMENT

The time and thought given to a study of wall treatments with the idea of securing color, pattern and texture exactly suited to the general decoration of rooms is well repaid with a greater measure of harmony. The walls and ceiling of a room are but the background against which the furnishings and accessories are displayed. When we keep in mind this fact there is less temptation to feature the walls too much in themselves by making them obtrusive in color, texture or design.

There is an interesting comparison between the walls and ceiling of a room and the backgrounds of artists' oil paintings which are usually made up of a variation in colors and texture. Mottling and blending, shadow and light effects go to make up the elements of interest in such backgrounds which simply serve as a foil for the principal object or group featured by the picture. Again, we have the backgrounds of nature which give us precedent for comparison. The fields, woods, mountains, seas and even the sky with its cloud formations all constitute backgrounds for principal or nearby objects and groups which form a picture for the eye.

In the making of backgrounds for the furnishing of room interiors, which are correlated to the decorative scheme as a whole and which sustain interest, the decorator has within his control the elements of color, texture and pattern or design. The other element which is not so much within his control and which influences the artistic appearance of decorated walls is that caused by the play of light and shadow in the room—the art of chiaroscuro.

One designing a color scheme, which includes the wall and ceiling decorations, may make a choice between the use of smooth surfaces and rough, between slightly rough sand finishes, moderately rough special textures and exceedingly rugged textures; one may choose between the use of opaque colors and transparent colors, between gloss surfaces and flat surfaces, between fabrics having fine, delicate weaves and those having coarse weaves; then, there is also a choice to be made as between simple, even-toned designs and colors in wall papers and those which are exceedingly strong in contrast of design and color.

In making selections from among these elements many considerations are involved. Some of these are the character of architecture, the amount and character of the light, the size of the rooms, the personal preferences of those who are to use the rooms and the general purposes for which the rooms are intended.

On smooth plaster or wall board walls one of the easiest ways to produce the variations in color tone and texture is by the use of Tiffany glazing, mottling and blending. And it is, of course, possible to convert smooth wall surfaces, by decorating, into moderately or exceedingly rough textures by the use of one of the many working methods described in the pages to follow.

The rough textured wall surfaces have gained tremendously in popularity of late because of their real

artistic merit. By the use of these treatments it is possible to produce wall decorations which possess just the right degree of color and texture or design to fit in perfectly with the whole decorative scheme for a room. Both the strength and character of color and textures are completely within the control of the decorator and these finishes have taken a permanent place in decoration. The rough textured finishes such as sand-float, caen stone, Holland, Old English plaster, Italian plaster, Roman tile, Spanish palm finish and others of the antique type are exceedingly appropriate, not alone for Spanish mission architecture and Italian villa types, but also for a very large number of homes built after modern American architectural ideas. The many homes built after the Frank Lloyd Wright, Walter Burley Griffin, Charles Barr Williams and other similar established types of architecture, as well as the very numerous interpretations of these distinctive types by other architects, are especially beautiful when the interiors are decorated with these rough textured wall finishes and the mottled blended effects. Such types of architecture give an impression of great strength and ruggedness with their horizontal planes predominating. The rough wall treatments, particularly, harmonize with this impression.

One of the peculiar advantages of the mottled and blended surfaces and, particularly of the rough textured treatments, is that they are enriched and mellowed by age. Even the accumulation of dust seems to add to their artistic appearance. As a rule, the smooth surfaces having mottled and blended effects are coated with starch. This protects them and makes it possible to wash them clean by removing the starch coating. Mottling and blending on the rough textures, being done with transparent water colors, may readily be washed off and renewed.

Altogether the great beauty and appropriateness of

the interesting rough wall textures and the mottled, blended surfaces constitute modes of decoration which can be skillfully done without exceptional effort. Such treatments constitute a real advance in the decoration of modern interiors.

The Market for Simple, Colorful Textures.—Since these special colorful effects and textures may be produced in very simple, subdued effects as well as strong, colorful and dominant treatments, it is essential that careful attention be given to a selection of appropriate decoration for various types of rooms.

It is obvious that the simple, subdued color schemes and textures are most appropriate for homes, schools, libraries, art shops, offices, neighborhood restaurants and tea rooms, clubs, banks, furniture stores and show rooms.

Theaters and other amusement places can be appropriately given a treatment which is a bit more ornamental. In fact, the decoration of such buildings ranges all the way from a quiet, restrained handling to the elaborate circus wagon type, using the extreme in the display of ornaments and a lavish use of colors.

The Market for Novelty and Bizarre Effects.—In such public places as witness the gayety of night life—theaters, cafes, restaurants, amusement park buildings, exhibition booths and convention rooms; shops and stores like those selling millinery, candy, flowers and other retail establishments, as well as many rooms which are devoted to serving the public, like beauty parlors, may appropriately be given more colorful effects and decorated with stronger texture and design. In other words, any room in business establishments where new and novel sales appeal is sought may well be decorated in stronger color, texture or design. In all cases, however, the decorations should be kept well within the bounds of good taste from the standpoint of harmony in color, texture and design to avoid

an impression negative to that desired. The latitude within which a decorator must work is limited simply by the moods of human nature. Rooms should be decorated so they will promote such human desires as those for a quiet, subdued atmosphere where study and relaxation may be pursued, a simple, dignified and businesslike atmosphere or such impressions as are desirable about places of amusement where the spirit of gaiety should predominate.

CHAPTER II

RELATION OF WALLS TO FURNISHINGS

Probably the first idea of importance when one starts out to construct a color scheme for any room is that of making a plan which will consider the room completely furnished as a whole. It is quite impossible to intelligently select colors for walls, wood trim, floors and ceilings without knowing the kind, character and color of the furniture, drapes and accessories in general, which are to be used as a part of the room. And yet this is done every day; more rooms are decorated without reference to the furnishings than after a plan which includes everything. As people in the mass become better educated in the artistic use of color, texture and design, this arbitrary selection of decoration for wall surfaces of rooms will diminish.

There is under way today a great renaissance of color, a revival of interest in color which is giving even greater impetus to the painting and decorating industries.

Intense interest is being aroused in the great masses of people in better and more extensive use of colors. Decorators, painters, textile workers and all who use color, are confronted with the necessity for learning more about the tasteful and harmonious use of colors. A greater knowledge of color pigments, liquids, theory of color and principles of color law is imperative for

those who would keep abreast of the times.

Having a plan for a color scheme makes one consider the room as a whole and points to the wisdom of correlating colors, textures and designs; it makes one construct the harmony of a room as an author constructs his story and as an artist plans his composition on canvas or in music.

The lack of a plan and organized thought in selecting color schemes is largely responsible for most failures to acquire harmony.

A lecturer who talks and talks aimlessly, who just rambles hither and yon, soon exhausts the patience and interest of his audience. A story in fiction or a drama without plot, direction, progression and climax is a flat failure. There is little or no difference between these and attempted decoration of a room to gain harmony of color in architecture and furnishings. We accept these flat failures because we have grown accustomed to them, and we live with them for years, all the while being influenced unfavorably in mentality and physically by them, unknowingly, as a rule.

Correlating Walls, Floors, Trim and Ceiling.—When a thoughtful plan has been made all furnishings and colors, textures and designs going into a room are selected with reference to the whole room as a unit. Of course, the question does arise with most people when they buy furniture, drapes or other furnishings, as to "how it will go with this or that," but even then there is usually no plan for the whole room; anxiety is present only lest one piece of furnishings should clash with another. How all correlate and fit together doesn't concern one as often as it should.

There ought to be less promiscuous buying of wallpapers, drapes, cretonne, cushions, scarfs, pictures, rugs, pottery and vases. When this is accomplished much more success will be gained in constructing beautiful, restful and harmonious interiors. The discords

will be eliminated and disorder will change to artistic arrangement.

The beauty of art is not a thing apart from all else. It is part of everyday life of people and is expressed constantly in the construction of private and public buildings.

Real beauty, art, comes from the satisfaction one feels when the eye, the intellect and the affections are satisfied.

Ornamentation, which is decoration, should add to the beauty of a structure as a whole. It is not necessary to the utility of a structure or article of merchandise, and it is bad decoration if it interferes with utility.

The result of good decoration should be a color effect as a whole,—not colors.

In color management, selecting colors which go well together is largely a matter of mathematically following rules; choosing colors which go well together is simply a matter of knowing colors and color principles.

The big thing in creating color schemes which are not only in harmony but which possess the quality of interest and have the power to sustain that interest indefinitely, is organization.

The difficult task is that of making a plan for color treatment of a room, gaining harmony by contrast of values, hues and intensities, harmony in balance, proportion and rhythm. That calls for judicious selection of bright and dull, warm and cool, advancing and receding colors, gloss and flat, large and small areas, location, repetition and arrangement of colors as well as appropriate wall textures.

The perfect color scheme sustains interest, it is livable and grows on one. It possesses neither great variety nor great likeness.

Too much variety causes restlessness; discord and chaos are extreme degrees of variety in contrasts of

values, hues or intensities. Too much variety in music or anything else is chaotic.

Too much of sameness, likeness and uniformity, on the other hand, dispels interest and is the extreme in monotony.

Climaxes and Centers of Interest.—Just as a drama and a story require a climax to make an entertaining, harmonious unit which sustains interest, so also must perfect and practical color schemes have climaxes.

Centers of interest which constitute climaxes are essential as elements around which the color schemes and all decoration can be constructed.

A climax in a room may be a brilliant, intense colored vase, a bit of white statuary or a bouquet of flowers arranged in a vase and grouped on a table so the light will reflect them in a mirror. The climax may be a fine book in art binding of pure, intense color arranged on a very light colored or white scarf on a table; it may be a rather large picture the colors of which are pure and intense and contrasting with great vigor. Window drapes of bright color greyed somewhat are too often the climax of a room.

As a rule the climax color of a room is very bright, but should be used in comparatively small area.

If pure, intense colors are used in more than one center of interest, unless the room is large, anti-climaxes will be present and the effectiveness of the decorative plan will be injured. Then the room will not be so restful and inviting. Stimulation for the eye nerves will come from too many sources in competition with each other for attention; those who live in the room become weary and uneasy without knowing the cause.

To be sure of balance in a color scheme, the rule to follow is that of having a small area of pure, intensely brilliant color balance a large area of dull, greyed and subdued color.

The principle of constructing a color scheme around a climax doesn't mean that all the colors, except those in the climax group, must be very dull greys or very low contrasts of value in other colors.

Moderate contrasts of values in self-tints and shades of the keynote color are permissible; moderate contrasts of values and of greyed hues of related colors may be used to good effect, too. And even complementary colors, considerably greyed or neutralized by the addition of white or complementary colors, can be used to add cheer and avoid a too sombre atmosphere in the color scheme before the climax color is introduced.

These related colors and subdued complementary colors may well occur in the rugs, drapes, pictures, pottery and odd furnishings.

Appropriateness of Colors and Textures.—The eternal fitness of things has most forceful illustration in the selection of color schemes for various rooms.

In a ladies' bedroom we may fittingly employ the light, delicate and airy tints,—greys, grey-greens, pale pink and silver, the delicate yellows and pale blues; but in the trophy room of a men's club such delicate harmony would be ridiculous. There more forceful, strong coloring, though in harmony, is needed. And there the use of quietly insistent complementary colors and stronger contrasts of values, hues and intensities are called for, as well as more rugged wall textures.

A millinery shop calls for a different handling of delicate colors in harmony. A novel and more colorful treatment and arrangements of colors to display greater strength of contrasts than in a lady's bedroom are needed.

The brilliant display of gold, vermilion, ivory and intense blues of the circus wagon finds no appropriate place in the decoration of home interiors. Although

the decoration of a business display room for powerful machinery ought by all means to make use of fairly intense complementary colors with strength of contrast of values.

Colors and wall finish textures must fit the purpose for which a room is used quite as much as is true in the case of merchandise. A strong and powerful piece of farm machinery is appropriately colored in intense reds and greens; it would look ridiculous painted in the baby blue or pink of a child's bed or high chair.

Balancing a Color Scheme.—On certain occasions a room is purposely decorated to give a warm or a cold atmosphere, as when a cold north bedroom is decorated warmly, or an excessively hot south room is given a cool atmosphere by decorative treatment. Also some rooms, like a dance hall, for example, are planned to have a very active, lively color scheme, while a library or school room calls for quiet, subdued, restful treatment.

The average room, however, needs a decorative plan which is well balanced between warm and cold tones, active and passive design. Neither too warm and stimulating, too cool and chilly, nor so neutral and drab as to be cheerless and uninteresting.

This balance of harmony and atmosphere is gained by judicious handling of pattern, texture or design on walls; skill in the use of bright, intense colors, warm and cool colors, greyed and neutral tints and shades, and, more specifically, by skill in creating contrasts of value (neither too high nor too low), contrasts of color hue and contrasts of color intensity.

Great care should be taken to avoid having extreme contrasts by all three methods—value, hue and intensity—at the same time. Self-tones and related colors may be fairly strong in contrast of value if they are

greyed or neutralized without proving too stimulating to the eye.

Comfort and a sense of well-being in humans results from balance. How we react to temperature and to light and dark indicates comfort, balance, or lack of them. Color may put us at ease in comfort or throw a human completely off balance, if there be lack of harmony or too large an area of strong, brilliant color. Such color tires the eye, as do also weak, washed-out colors. The sense of balance seems to come from near the greys in the color scale.

Upon the area of strong color the balance of a color scheme also depends. We like strong colors, but in small amounts. A comparatively small spot of bright red, yellow or blue will balance a great area of grey and other dull, harmonizing color tints and shades. So bright colors only excite and fatigue the eye when used in large areas.

And, of course, the general principle requiring that a gradation of color from floor to ceiling should exist should not be lost sight of. Walls ought to be a lighter tone than the floor; ceiling ought to be lighter tone than the wall. This is a contrast of values; the contrast should not be great; just a pleasing gradation from the bottom up as in nature with its black or dark colored earth to its light blue sky.

Dark colors on top or in the middle just naturally throw a color scheme out of balance. Dark colors appear heavy, as do also bright colors in certain combinations with light tints, and the laws of gravity place weight at the bottom. That is, then, the agreeable, natural and pleasing arrangement.

Color Schemes for the Living Room.—The living room, as the name suggests, has ever been the place where most of the family life is spent, where friends and visitors are entertained. Here should be created an at-

mosphere of comfort, relaxation and quiet refinement.

Extraordinary or novel effects in this room might entertain or amuse the guests, but they are sure to become tiresome to the family. Such decoration doesn't sustain interest well and is likely to be too stimulating to associate with seven days in the week. A conventional and conservative expression of good taste in decoration is more fitting in the living room.

The color note may be any of the greyed or neutral tints and shades. Tans, moderately light browns, warm greys, old blue, grey-green and neutral blue-green, dull russet, buff, olive or sage green, warm drab and Bedford stone are some of the colors which are suitable.

The selection of a color scheme for a room where there is one invariable element, that is, where the furniture or rug has already been selected must necessarily proceed from the color of such furniture or rugs. In other words, the keynote color of the room must be that of the rug or furniture—related to or complementary to them.

This keynote color may, of course, contrast with the rug or furniture in color hue and in value, using lighter tints and darker shades. The character of the room coloring may be made either warm or cool in general atmosphere, even when starting from a fixed element of color, like furniture and rugs, which are apt to be of warm tones. Likewise, the color scheme can be either receding or advancing in character, depending upon the size and shape of the room.

For the purpose of illustration, let us assume that we have a new living room without color, except the natural new colors of walls, wood trim and floor.

The first consideration is the size and shape of the room. Is it too small and does it require giving apparently increased size? Is it a large room in which a wide range of choice in colors, textures and designs

is offered? Are the celings quite high, affording an opportunity to use fairly dark colors, or are they low, requiring very light colors? Is the room quite ornate, architecturally, or is it plain and simple? Is there a large amount of wood trim or is it of a type which has no door or window casings? Are the walls occupied largely with built-in furniture, resulting in comparatively small wall area? Are the wall surfaces continuous or are they broken up by trim, by wood paneling or by paneling with moldings?

When you have made a study of the room and have a clear idea of its character in answer to these questions, the next step in making a color scheme plan is to decide on a keynote color. Is the general color atmosphere to be very light, moderately light or quite dark? Is the color feeling of the room to be warm, cool or simply neutral? What are the color preferences of the people who are to occupy the room? These should be considered but should not be allowed to dominate the color scheme unless they coincide with the other elements involved.

What is the character of the light—is the room flooded with sunlight, is it moderately light, or is artificial light depended upon much of the time?

Until one is experienced in the selection of color schemes, the safest method to pursue as the first step is to choose one keynote color and then follow the principle of harmony by using self-tones—lighter tints and darker shades of that color for the surfaces of largest area, which are the walls, the floor and ceiling. Then to this related colors can be added in a limited way to gain additional harmony by the principle of analogy; or as one becomes more skilled complementary colors which are in perfect contrast with the keynote color may be used in a greyed tone and in small areas.

The accomplishment sought in working with these principles of color harmony should be to construct a

color scheme which is rather subdued, low in tone and quietly harmonious. This refers not alone to the colors and textures for walls, floor, ceilings and trim, but also to the selection of furniture, rugs, pictures and usually the window drapes.

Special care should be exercised to avoid the use of large and fairly large areas of white, such as glaringly white lace curtains, dresser scarfs and table covers. The use of rather large white mats on pictures is especially a glaring weakness of many interior color schemes, because they give the effect of a hole in the wall. There is little reason to have a mat on many pictures, but when a mat is used it should be very subdued in color, should be a self-tone with the dominating color of the picture and frame, or it should be covered with a fabric which will tone in with the picture, the frame and the wall. The general color scheme of a room may be good, and yet, if a comparatively large area of white in lace curtains, picture mats, scarfs or table covers are present they are a discord in the harmony because they attract too much attention to themselves. These furnishings should be of such a color hue as will harmonize with the general keynote color of the room as a soft tint or shade, as a related color, or as a very much greyed complementary color.

The whole color atmosphere of a room should be so quietly harmonious up to this point that when a stranger steps into the room for the first time no single element will draw attention to itself immediately. The general atmosphere should be comparable to a chord of music in its harmony. In other words, your contrasts of color values—light tints and dark shades of the key color—related colors and complementary colors in greyed small areas should constitute one harmonious whole.

Having accomplished this much, there remains one

more element to direct in completing the plan for the color scheme. This is to introduce a climax around which the whole harmony revolves. This climax may be composed of a small area of bright color or complementary colors, and it may take one of several forms.

The climax may be a brightly colored vase full of flowers on a mantel, on a bookcase or on a table in a living room; it may be a brilliant vase and flowers on a small table before a mirror in a reception hall in which the mirror, table and the vase are grouped to form a pleasing symphony of color and form.

This climax or feature of special interest in a room may be a bit of statuary in white or bright colors, it may be a rich scarf or table cover, or it may be a picture of brilliant hue of one or more colors. In other words, the charm of a room results largely from directing the attention of one entering the room to one tastefully constructed group or element in that room.

The same principle applies to the bedroom with its beds and beautiful drapes featured, or with a vase of flowers displayed on a dresser before a mirror, or with its beautiful dominant picture.

The climax of the dining room is the completely decorated and furnished table with the meal spread ready for guests; in a library the climax feature may be the brightly colored book bindings or it may be a beautiful picture in bright colors, and if neither of these it may be a bright bit of statuary or vase on the desk.

At times the climax or center of interest is the window drapes, but it is much better to subdue these in favor of some other feature of interest in the room. There is often good reason for using brightly colored drapes, and this can still be done if the colors are subdued or of a greyed character; they may be bright and yet be subdued with overdrapes so as to avoid compe-

tition for attention with the real climax of the room.

The Dining Room.—The atmosphere which is sought in decorating a dining-room is one which will radiate an impression of good cheer. What we should seek to accomplish is not alone an atmosphere of good cheer but, also, to impart a sense of comfort, warmth and relaxation.

Probably the color harmony principle of using related colors is most commonly useful and the color should be in the medium dark values, rather than extremely light or very dark. Intensely stimulating colors for the general tone ought not to be used.

If a color scheme selected using light colors tends to appear a bit sombre and too dull the atmosphere of the room can easily be given a cheerful note by the use of a small area of complementary color in the pictures, in vases and window drapes.

After all, the decoration of a dining-room should produce a quiet, rather low toned harmony as between the walls, ceiling, wood-trim, furniture and drapes. The central point of interest, the climax, in a dining-room setting is composed of dishes and the table decorations. There should be nothing about the walls, drapes or furnishings of the room which is so bright and advancing as to compete for attention with the dishes, decorations and food upon the table.

For specific suggestions these colors might be considered: Delft blue, old blue, dull grayed orange or russet, sage green, gray-green, dark tans, leather brown and dark French gray.

Kitchen Colors.—In the past few years there has been what might be called a great reformation in the furnishing and decorating of kitchens. It is quite likely that the advertising of kitchen furniture, utensils and equipment is largely responsible for this, because this vast amount of advertising has pictured in the maga-

zines how beautiful and inviting the atmosphere of a kitchen can be.

In this day we like to have a kitchen appear just as bright, spick and span as it really is. This appearance can be gained by the handling of colors for the kitchen. In the first place smooth walls are preferable to rough textures. Gloss or semi-gloss is preferred to a flat lustreless surface. There is a practical reason back of this also. In a kitchen there is a daily releasing of steam laden with more or less grease from cooking; also there is bound to be more or less smoke. Accumulations of smoke and grease occur on the walls and ceiling. If the walls have a gloss and are smooth they can readily be washed, whereas rough walls accumulate dirt and hold it. Flat walls spot easily and cannot be washed, at least not more than once.

Dark colors do not give the right appearance in kitchens. The color should be light, bright and cheerful as well as shiny. A duplication of the semi-gloss evident upon kitchen cabinets, stoves and plumbing fixtures may well be continued on the walls and ceiling.

White, ivory or very light gray, green or blue enameled woodwork is also a necessary part of a color plan. Then, when very light, airy curtain material is used and you have the brightness of a growing plant or two about the windows an ideal setting has been gained with the impression of brightness and cleanliness.

What is needed to complete the balance in such color schemes is a note of bright color in small area. Bright but greyed reds, blues, greens, oranges or yellows may be introduced in some form. Bright but small spots of color in plain colored curtains give the added balance. A brightly colored shade on the electric light may give the bright color note needed. It may be

that a brightly colored linoleum will add all the contrast which the room calls for. The blues and greens are especially welcome in the kitchen because of their cool tones.

Some of the color schemes which will give a novel character to a kitchen, used principally for the curtains, are these: Blue, white and yellow-orange; yellowish-green with black and cream or ivory.

Library and Private Offices.—If there is any room in which the color treatment and furnishings should not call attention to themselves or clamor for notice it is in a library, a study or a private office in homes and business places. In such rooms the occupants want agreeable surroundings but they do not want active eye stimulations which will divert from the work in hand, whether it be study or the transaction of business. What is wanted is an atmosphere of comfort which is conducive to quiet and restfulness.

The color schemes for such rooms may be built up from medium dark greyed colors and the less intense tones. Receding rather than advancing colors are desirable and, above all, simplicity in color combination as well as pattern, texture and design are to be gained. Even the floor coverings, furniture and window drapes should be subdued and should harmonize in low values rather than to contrast greatly in value. If there are any art objects or accessories used they may be in bronze or dull polychrome.

Such a color scheme is likely to become a bit sombre and needs a note of contrasting color. This may be supplied by a central point of interest, or climax, which is in the form of a not too large, brightly colored picture or a vase containing flowers in well selected colors. If there are any decorative designs on the walls such as a frieze or stencil band it should be in simple, classic design and self-tone or colors related to the wall color.

Bedroom Colors.—The atmosphere to be created by color schemes for sleeping rooms should be one of restfulness and relaxation. Light colors are much to be preferred to dark shades. Generally speaking, the colors should be warm unless the room happens to be of the low ceiling type on the south side of a home which actually becomes very warm during the summer; in which case the cool, blue-grays with a bit of contrasting orange, gold or pink are used. Cool bluish-greens and greenish-grays with pale lavender and black are useful in such rooms. For other bedrooms light grays which have yellow or red in their makeup for warmth, ivory with light olive green, dull blue or gold are good color combinations, as are also delicate blues, creams and light grays.

Mere common sense warns us also against the so-called spring greens, or even the too strong blues in bed rooms. But if the vivid hues are out of keeping, equally so are the sad and sombre colors. Sheer common sense again warns us against the depressing, melancholy tones, against blues of too great weight, against the solemn purples that have been called the "ashes of color," against certain dark reds which may be described as sullen.

There are left, then, for bedroom use, various shades of yellow, soft greens, soft blues and grays; and the possibilities for working out variations upon these, as well as for combining them into color chords, are infinite.

No color is more suited to the bedroom than grey, which has been called the peacemaker of colors. Nature, as we all know, uses grey and grey-browns lavishly when she wishes foils for her particular beauties. We realize this when we note her coloring of the ground, of rocks and of certain lichen vegetation.

Grey is a versatile color, almost a treacherous one, for in certain states—in that of steely tone, for in-

stance, where it is a mean between black and white—it is far from friendly. Rather it is suggestive of mediaeval prisons and of stern limitations. On the other hand, when warmed with an admixture of yellow, or a small amount of red, grey will prove essentially fit for the restful room.

As sheer gray suggests limitation, blue, even in its heavy forms, suggests the illimitable. In its lightest tones a characteristic of the limitless sky, blue possesses the rare quality of allurement.

Color Schemes for the Hall.—The entrance hall is the first introduction visitors have to the home and is responsible for the first impressions gained. It ought to be decorated in warm cheerful colors ordinarily and also to harmonize with the living room.

Yellow tints or shades, tans, light browns and sometimes dull rose, buff, fawn, ivory and cream are desirable in this room.

For large halls fairly dark greens and dull red, drabs and browns are permissible but they are quite certain to cause a small hall to appear still smaller. The tints in small halls should be very light always.

Schools, Churches and Banks.—Quiet and dignified color plans are most suitable for these buildings. Neither color or stencil design should be strong enough to attract or divert attention. Dull, low tones of buff, drab, green, gray, blue, russet and brown serve the purpose admirably and offer a wide range of colors but they are likely to be dull and monotonous unless a certain amount of luminous or bright color is added such as in a stencil here and there to give the necessary amount of life and brightness without disturbing the dominant tone of the quiet, restful colors.

Color Schemes for Children.—A much better choice of decorations for a child's bedroom or nursery is more evident today than ever before, but there is still some tendency to force upon children color schemes which

are appreciated more by grown-ups. A child's natural preference for colors tends towards bright, pure tones. It is possible to satisfy that preference without making a room too intensely stimulating to grown-ups.

When we attempt to force upon children a preference for quiet, subdued harmony very early in their lives nothing is really gained by it. In the beginning a child's preference is quite similar to the preferences of primitive peoples and savages. When children are allowed to exercise their preference at first they naturally become satiated with brilliant, pure colors and come naturally to a perference for true color harmony of greyed tones later in life.

The large surfaces such as walls and ceilings and floors in a child's room may well be given greyed, subdued colors but let there be considerable areas of the walls near the bottom which contain pictures or decorations done in pure, bright complementary colors. The pure intense reds, orange, yellow, blue, green and purple in moderate areas will satisfy and amuse the children without undue stimulation to mature persons.

The furniture of a child's room may well be colored with the greyed color hues, generally, but each piece of furniture should have its small area of pure, bright color. The toys will come naturally in bright colors, too. The bright colors and the grayed colors of the furniture should, of course, harmonize with the floor, walls, ceiling and wood trim colors.

Large Rooms.—Moderately large rooms offer greater latitude in choice of colors, textures and design than is possible in small rooms.

Here color schemes may be used which utilize greater contrasts of values, as between tints and shades of one color or as between light and dark colors; also colors may be used which constitute greater contrast of color hues, of related colors or complementary colors; and here also colors are permissible which show

a greater contrast of intensity in pure, brilliant tone as between complementary colors and related colors.

In other words, stronger, brighter colors, those which have been greyed or neutralized to a lesser degree by mixing in white or complementary colors may be used in large rooms.

In moderately large rooms the advancing colors may be effectively used, not in their pure brilliant tones because that might produce too great a contrast of intensity, contrast of color hue and contrast of values as well.

But the advancing colors which are orange, reds, yellows, creams and light tans may be used in less greyed or less neutralized degrees.

Pure, intense tones of blues and greens are advancing colors as compared to greyed tints and shades of blues and greens. As compared to pure intense reds, orange and yellow, the pure bright blues and greens are, of course, receding colors.

Gloss and semi-gloss finishes may be used in large rooms but should not be used in small rooms, since they apparently emphasize the limits of vision and appear to make a room smaller. Flat finish is best for small rooms and may also be used in large rooms.

On the walls of large rooms very rough textures in special wall finishes like old English, Holland and Roman Travertine are fitting, as also are stronger designs in wall paper which contrast to a greater degree in values, hues and intensities of colors than should be permitted in small rooms.

Small Rooms.—A selection of color schemes for small rooms usually involves a consideration of ways and means to apparently increase the size of the room. Even when this is not especially desired the decorator must at least avoid a color treatment which will apparently shrink the size of a room.

Walls of a room limit the vision. Colors on walls

emphasize or minimize this limitation according to their character.

Generally speaking, the receding colors are the blues, greens and the darker shades of other colors. Pure intense blues and greens are, however, receding colors only when compared to other pure, intense colors like orange, reds and yellows. Pure intense blues and greens are advancing colors compared to light tints and greyed hues of blues and greens when used in large areas.

Greens, blues and blue-greys which can be used on large wall areas to give a receding atmosphere are such as range from pale, pure tints of these colors to greyed, neutralized dark shades like olive shades and old blues.

When you reduce the intensity of these pure blues and greens by mixing white with them, or neutralize them with their complementary colors, orange and red, you remove their insistent display strength, you make them as fully receding as possible, with the consequent effect of apparently increasing the size of the room.

By the use of strong advancing colors like yellows, orange, reds and all tints which can be used to express sunlight the wall limitations are emphasized and made to appear nearer at hand—the room seems smaller with bright colors on the walls.

Gloss colors are more advancing than flat colors.

Spotty and strong patterns, stripes and designs in general which contrast sharply in values emphasize the limit of vision and should not be used in small rooms. Wall paper having large and prominent design which contrasts highly in value, hue or intensity is especially to be avoided in small rooms.

In nature's great color schemes the foreground is rough and broken but the distant hills and horizon are visible only as grey-greens, grey-blues and misty greys.

In like manner we must construct color schemes for rooms to be given an apparently larger size.

To sum up, then, color schemes for small rooms and all decoration to give the effect of distance and recession should be composed of weak, light patterns, if design is attempted on the walls in the form of wall paper or as rough textures of special wall finishes. Patterns of rugs and linoleums for the floors in small rooms ought also to be small, light in form and color contrasts of values, hue and intensity ought to be low. In some rooms perfectly smooth walls without texture are needed.

Walls in small rooms should have a flat, not gloss, finish and the greyed blues and greens and cold greys are the colors to use for key colors. Self-tones and very closely related colors are especially useful in small rooms.

If the ceiling of a small room is low, increased height can be apparently given by the use of vertical stripes in wall paper or stencil designs on the walls. These should be in self-colors or very greyed tints of related colors having little contrast of values. Strong contrasts of values, hues or intensity will make the wall advancing in color and apparently decrease the size of the room.

Vertical panels using picture mouldings will also apparently increase the height of low ceilings.

A ceiling too high may be lowered apparently by use of darker color on it, by lowering the picture moulding to create a wide frieze at the top of the wall to be colored like the ceiling. Horizontal panels of picture mouldings will also decrease the height of ceilings.

North Exposure.—Obviously rooms on the north side of the residence receive no direct sunlight and while they may be just as warm in fact, owing to an effi-

cient heating plant, they often seem cold and lack the cheer of rooms receiving the direct rays of the sun. This condition then offers an opportunity to the decorator to add to the room a warm, cheerful atmosphere. For both walls and stencils tints and shades of the warm colors, red, yellow orange and warm brown are in order for this purpose also. Tan, cream, ivory, old rose, warm grey (has red or yellow in its makeup) and green which is toned with red, orange or yellow.

Often a wall color that is much too dull and cool for a north room can be brightened up materially by using quite strong, warm colors in the stencils. A fairly dark cobalt blue, for instance, on the upper side wall of a north exposure dining room may effectively be warmed up by stencil tints of light brown, tan, buff or cream.

The woodwork would best be fumed oak or one of the brown oak shades, mahogany, natural birch, maple, pine, cherry, cypress, ivory or other warm colored enamel.

South Exposure.—The aim in decorating such rooms is diametrically opposite from that for north exposures. The colors ought to be such as will modify the glare of direct sunlight and to cause the rooms to appear cool. The cold colors, blue, green, grey, violet, purple and lavender, are now most useful. The grey ought not to contain red or yellow and the green should be one in which the blue, not yellow, predominates. In a room that is very light the greys may be most satisfactory; they do not fade so soon or as readily as the greens, blues, etc.

Blue-green and old blue made by tempering blue with black are much to be preferred to either color in its full or pure state.

Light and Dark Rooms.—When rooms to be decorated are lighter than average extra care ought to be taken

to avoid the use of pure, intense colors and even bright but greyed colors in large areas. In such rooms the bright light causes colors to display their brightness to the greatest extent.

In light rooms it is equally important to avoid great contrast of values, hues and intensities of colors, also strong patterns in wall paper and all greatly contrasting design.

Useful colors in very light rooms are: French grey, warm grey, pearl greys, olive, old blue, dull reds, neutral greens.

Dark rooms, on the other hand, may well be decorated in rather a colorful manner. Strong contrasts of value, hue and intensity are permissible and are often urgently needed; especially are the sunshine colors needed—yellows, reds and orange tints.

In dark rooms, too, the wall patterns in paper and stencil design as well as rough textures of special wall finishes can be more prominent.

Colors used in dark rooms may be selected to add light to them. Yellow reflects more white light than any other color; so the yellows, cream, ivory and light tans and buff are useful colors in dark rooms.

Glaringly light rooms are made more restful by the selection of dull greens, greyed blues and greenish or bluish greys. These colors absorb more light than they reflect. Deeper, darker, though neutralized, greens and blues may be used in rooms which are possessed of strong natural light.

Colors for Wood Trim.—Having wood trim which is out of harmony with the decorative scheme preferred for a room it is always possible, obviously, to paint or enamel the trim a color which does fit in with wall colors wanted and the furnishings. That, in fact, is the English and European practice. In America where there is so much beautiful wood trim naturally finished, many are reluctant to enamel it and thus hide

the grain. It is an outstanding fact, however, that a color harmonious interior as a whole is often not possible without changing the color of the wood trim. Often by staining natural colored trim, or restaining stained trim, its color can be made to harmonize with the balance of the scheme, at the same time preserving the beauty of the natural grain.

There is a much greater tendency today than ever to subordinate the wood trim, to paint it out, in order to make it a part of the color scheme in harmony with the whole unit. Often, in small rooms especially, it is painted or enameled the same color as the walls; or it may be a tint or shade of the wall color—a bit lighter or darker.

At times a related color or a complementary color in greyed or neutralized degree is needed. The amount or area of the wood trim is the determining factor. The greater the area of wood trim the less prominence and less contrast in the color are needed.

Many have the idea that Colonial architecture must invariably be enameled white. This is not in accord with the dictates of history or of color harmony. In these old homes the wood trim was also colored with greys, dull greens, yellowish browns and with other tints and shades.

In any discussion of colors to combine with different kinds of stained wood there is always the difficulty that the name of the wood is taken as expressing a color thought—while as a matter of fact it does nothing of the kind. It means nothing but a crude material which may alter in color according to how it is finished.

Wood, as a rule when finished for interior trim or for furniture, has a color, light or dark, produced by the finishing materials which must be considered alone. To say, therefore, that grey-blues combine with walnut or dark greens combine with mahogany is mean-

ingless excepting that it refers in a general way to the colors in which these woods are commonly finished. It is unsafe to depend on such rules excepting as the most general of guides. A goodly number of shades of mahogany finish and oak used in interiors may be colored grey, green, black, yellow or brown.

If any degree of refinement is to be secured it is much better to get down to basic principles of color harmony and work out each problem independently with the color of the particular piece of wood as a starting point.

It is often a mistake in redecorating rooms to leave the woodwork in the color in which it is found. There has been for years a tradition among decorators that it is something akin to sacrilege to paint good woodwork.

The architect and the builder are accountable primarily. They build a house and put the dark-colored oak and mahogany trim in the hall-ways and the billiard-room, in the library and the study in the time-honored belief that these rooms call for dark shades in woodwork. Notwithstanding tradition, common sense dictates that if these rooms are in any degree lacking in natural light, as they often are, they should be treated in receding, light-reflecting colors—tones that make rooms look larger, lighter and more cheery.

Ceiling Colorings.—A lazy habit in our midst is largely responsible for the fact that most ceilings are thoughtlessly colored plain white, ivory or cream as a rule, giving an impression of a room without a roof; the walls seem to stand alone.

It is said that these tints reflect light and so they do but in most rooms that is of minor importance. Complete color harmony is often sacrificed by our indifference to ceiling colors.

Often on average jobs the contrast of values between ceiling and walls is too great; the ceilings, then, are

not a continuation of the harmony of walls, trim, floor and furnishings, yet a ceiling is just as much a part of the room as these other elements.

It is true that dark colors are not permissible on ceilings, unless they are unusually high and there is a wish to apparently lower them by decorative treatment. But more color can be carried to ceilings without lowering them and greater unity in the harmony of interiors will result. Related colors, or complementary colors much greyed and in light tints, are quite as suitable as the self-tints usually used. For example, in a color scheme the key color of which is brown with climax color of rather pure, intense orange and subordinate shades of greyed blues, a selection for a ceiling color could be a light tint or greyed orange or a light greyed blue tint.

And when self-tints are used they may well be a bit more colorful, since as a rule now the contrast of values between ceiling and walls is too high, too great.

Colors of pure intensity must not be used on ceilings. Strong contrasts of value, hue or intensity of ceiling color makes a ceiling too prominent, too advancing.

Floor Colors and Designs.—If we would gain harmony in a room as a whole and center attention on a climax consisting of a single display of bright color or a concentrated group of color, then strongly contrasting color and design in rugs, tile or linoleums must not be allowed.

It is best to have floor colors and designs subdued and quietly harmonious with the room as a whole. The floor is the foundation, it should be a darker tone than walls and should not be so strong in color or design as to compete with the climax point of the room. Self-tones and related colors low in contrast of value, hue and intensity are essential. When complementary colors appear they must be much subdued and greyed.

Pictures, Frames, Mats.—The selection of pictures for

a home is nearly always an exceedingly personal affair. Decorators have little opportunity to advise concerning the character of pictures which come into a home, but they can as a rule have a voice in allotting certain pictures to appropriate rooms. Personal preferences of the occupants will be asserted, in some instances, regardless of what their choice of pictures does to a color scheme, but a decorator who can point out good reasons for his preference usually has his way.

Pictures which are very colorful displaying pure, intense colors in large area should be used only as a climax or central point of interest in a color scheme. One to the average room is quite enough; more than one picture like the brilliant red English coaching scenes and such as have strong contrasts like the poster style is likely to set up competition for attention. Also too much eye stimulation will result, with attendant fatigue and restlessness.

Picture frames should tone-in with the pictures, the wall color, furniture and wood trim. Well framed pictures as a rule have frames which repeat the key color of the picture in self tints or shades; sometimes a greyed, related color or a much greyed complementary color is used on the picture frame.

Mats are quite useless on many pictures and are often very bad for a color scheme. White and very light colored mats give the effect of a hole in the wall; they clamor for attention and irritate the eye nerves. White is more advancing than many colors and is quite as likely to be a note of discord in a color scheme as a vivid color which is out of harmony. In fact pure white areas like picture mats, table covers, scarfs and lace curtains are likely to separate from the color scheme and jump out at you, especially when the wall color and the whole scheme is low in contrast of values or rather dark.

A white area in a room is usually the first element noticed on entering and it competes for attention always.

If mats are used they should be subdued by coloring to harmonize in low value with the frames and pictures. Self-tones repeating the frame colors are usually safest to use. Sometimes a mat may be covered with a fabric of just the right related color or greyed complementary color, but extreme care must be taken to avoid making the mat more prominent and advancing than the picture itself.

Drapes and Window Shades.—Window hangings are often made the color climax of a room, rather unconsciously, to be sure, but sometimes with good effect.

If the windows are not too large and too numerous and other centers of interest are lacking a note of cheer may well be given by using pure, intensely colored drapes.

The tendency now is to build more and larger windows in homes and there is considerable likelihood that brightly colored drapes in such homes will be a jarring note, because of the large areas.

In those cases where large areas of drapes are needed the color should be of a very much greyed and subdued character and of plain colors, rather than strong figures and patterns of design like cretonne.

As a general rule where the color climax of a room is at some point of interest other than the windows, the drapes should be in subdued colors. The dominant color note of the walls and the color scheme in general is the key to correct and easy selection of the drapes and shades.

When wall paper is used the drapes may repeat one of the color notes of the paper, matching it in self tint or shade, and in the case of drapes of silk or other fabrics with a sheen, the dominant hue of the wall color is also repeated in the drapes.

When the wallpaper or all-over stencil designs are rather prominent the drapes ought to be of plain, subdued color fabrics.

Drapes, in general, may be a harmony of self-tones with the wall colors, they may be related colors or complementary colors subdued by having been greyed or neutralized. And the contrasts of values should not be great—a scheme of low tones is best.

Many textiles and objects of nature reflect a series of related colors. Red velvet drapes in sunlight show orange where light strikes directly, shading to orange-red, red and red-violet in the shadows. A green leaf on a tree reflects yellow-green, green, blue-green and dark blue in shadows. Such surfaces displaying a play of light and shadow make charming drapes.

Panels and Stripes.—Although walls should remain always as the background, the foil against which the furnishings are displayed, it is, nevertheless, possible for a wall to be too flat, uninteresting and monotonous.

Walls of large area may be broken up in many ways. The rough textures of special wall finishes like Roman Travertine, Old English, Holland, Sand-Float and Tiffany Mottling and Blending accomplish this artistically. Well selected wall papers serve the purpose.

Panels formed of picture mouldings and proportioned with a good sense of balance are excellent. Vertical panels apparently increase the height of a ceiling. Horizontal panels lower a ceiling, apparently.

Vertical stripes in wall paper or applied by stencils or the vertical textures of rough special wall finishes give apparent increased height.

All-over patterns of wall paper break up an uninteresting wall and the all-over diaper stencil patterns so much used in England give a very interesting note of design and self-tones or related colors. Strong contrasts of values, of color hues and of intensity of colors must be avoided in all-over designs.

A flat, uninteresting wall may also be relieved by slight changes architecturally; the addition of vertical pilasters or columns against the walls reaching about two-thirds or three-fourths of the way up to the ceiling. These may be built in pairs or singly on all walls of the room, being careful to balance them. With a projecting cap at the top or cornice of mouldings, a finish is gained and an opportunity offered for a decorative effect by placing a vase, lamp, bit of pottery or a growing plant on top.

A Suggested Experiment.—While it is always useful to have a set of color cards handy showing individual colors this usually confuses the average customer. It will be much more useful if you will make up a set of color cards which is composed of perfect combinations of colors. A search for such color combinations and the habit of making note of them is a profitable enterprise.

In your search for useful color groups it is well to take particular note of the impression given by each type of color combination. Note the simplicity, dignity and attractiveness of the self-tone color schemes. Make a search for these not only in the color schemes used on the interior of homes, public buildings, show windows and in merchants' shops, but also, such color schemes in nature. In your scrap-book make up half a dozen color schemes after this principle, by mixing colors in the ordinary manner and spreading them on to sheets of heavy water color paper, in two or three coats. When the paint is dry cut out color chips two or three inches square and paste them in your scrap-book. If you will do this for each of the tints or shades used in a self-tone color scheme you will have a group of harmonizing colors which will be useful for a long time and for many jobs.

In this first group you should have color schemes each one of which is made up of self-tones of one color

and which illustrate how contrasts in values—contrast of light and dark colors, add life to the scheme. Then, this group should include color schemes which are warm, those which are cold and those which are composed of greyed or neutral colors.

In this same scrap-book, but in another section, begin a collection of color schemes which harmonize by the principle of related colors-analogy. Note how the addition of related color adds life to a self-tone color scheme. In this group divide the color schemes into three classes, too,—color schemes which are warm, some which are cold and some which are greyed or neutralized.

In still another section of your scrap-book start a collection of color schemes which are constructed after the principle of complementary colors and noting, particularly, how much more perfectly they balance and satisfy than either of the other two groups.

In searching for groups of colors which harmonize there are many fields which offer both pleasure and profitable returns. Public buildings and homes which have been decorated according to the plans of professional decorators who are capable offer much material for study. In museums and art galleries the paintings, textiles, pottery and art objects of many kinds offer numerous illustrations of color harmony by one principle or another. In nature, illustrations of color harmony are limitless.

In all your observations following these suggestions you will find great variety; there are color schemes of greys alone, of several values of one color, of greys and one other color, of black and one other color, of greys and two other colors, of black and two other colors and of three or more colors with the addition of grey or black.

CHAPTER III

PROCEDURE IN DECORATING

Just where to make a start on any job of decorating is often a point of considerable uncertainty with one learning this work. And it is worth considerable thought because starting in the wrong place is not only contrary to trade practice in the sight of others, but often it leads to confusion, loss of time and the completion of a job in a defective manner.

By way of illustrating these points, consider the varnishing of a floor. If the work is not started in the far corner away from the door the decorator finds himself in the far corner of the room at the completion of the job surrounded by wet varnish. He is unable to walk to the door without stepping in wet varnish. Sounds ridiculous, doesn't it? Yet that has been done.

Cleaning Up the Place.—About the first step to be taken in the decoration of a new or old room is to do a thorough job of cleaning of walls, ceiling, woodwork and floor. The importance of removing all loose dust and dirt as well as any rubbish, plaster, lumber, etc., from the room in a thorough manner cannot be overemphasized where high class work is to be done.

Drop Cloths Needed.—After all loose plaster has been removed from the wood trim, walls, floors, etc., and the room made thoroughly clean, you are ready to

cover the floor and any book-cases or built-in furniture with drop cloths which are large pieces of light weight duck or heavy muslin sewed into large squares which range all the way from about 10 feet square to many times that size.

Ladders and Planks.—The next requirement to enable you to reach the ceiling and upper walls is that you provide either the common type of painter trestle ladders and ordinary planks such as are illustrated in Plate 1, or the patented, adjustable scaffolds and extension planks.

Having your scaffold in place, you are in position to do a thorough job of cleaning by removing loose plaster and dust from new walls or by washing old calcimined or painted surfaces.

In small rooms two of the trestles and one long plank are usually enough to permit two men to work. In large rooms four, six or eight scaffolds of this kind are used to save time. In retail store buildings, where business is carried on while decorating is being done, the trestles and planks are put up and large drop cloths are placed on top of this working platform rather than upon the floor so that the decorators can work during business hours without the likelihood that paint may be spattered upon merchandise or customers below. This same arrangement is used while decorating large factory work-rooms as well as in churches and other public buildings. Very often in churches it is essential to use the adjustable, patented scaffolding jacks or to build up a regular carpenter's scaffold, using 2 x 4 or 4 x 4 timbers and planks. There are, of course, scaffolding concerns which make a business of erecting scaffolds for decorators on these large, special jobs. For instance, in painting the White House at Washington which is done every third year, a separate contract for scaffolding the whole job is let.

Plate 1.—Trestles, Ordinary Plank and Extension Plank.

Where to Begin to Work.—The procedure in decorating the average room is that of working on the wood trim and finishing it including the staining, filling and varnishing before the ceiling and walls are decorated. Next the ceiling is decorated. After that the walls are calcimined, painted, glazed or covered with wall paper or fabric.

In calcimining or painting the walls the beginning is made in the upper left hand corner, working from the top of the wall to the bottom and from left to right. A stretch of painted surface is carried down from top to bottom about as wide as a comfortable sweep of the arm can take, although in the use of flat paint and enamel a stretch only about one or two feet wide carried down from top to bottom is ample to permit keeping the edges wet for proper brushing.

The floors are finished last and the work should start in one of the far corners of the room proceeding from that point to the door.

No matter how thoroughly the surface in a room has been cleaned at first it is a wise precaution to dust them off immediately before applying paint, enamel, varnish, etc.

CHAPTER IV

PREPARATION OF SURFACES

As in the building of a house and most all other undertakings the foundation work is all important. Preparation of surfaces for decorating constitutes the foundation of the job, and unless it is thoroughly done one cannot reasonably expect a perfect and highly attractive result.

New Smooth-Finish Plaster.—On the average job the decorator will find that the plasterer has left more or less material splashed on corners and edges of wood trim and there may be rough places here and there. All excess plaster should be removed in a clean manner and any rough places on the walls ought to be sanded down smooth by rubbing the rough places with fine sandpaper on a block of wood. In this rubbing care should be taken to avoid cutting through the glazed surface of the plaster. If it is rubbed through you will produce a suction spot which will show up flat on your finished coat, unless coated with shellac and an extra film of paint. If there are any blisters in the plaster, due to careless mixing of the material, they ought to be cut out and filled with putty as described later in this chapter.

Around door and window casings as well as in some corners there will be cracks and openings which should also be filled with putty.

After all filled and repair patches have been made and are dry they should be coated with thin shellac before proceeding with the job. The object of this is to produce a surface on these patches which is equally hard and well filled as the trowel-glazed surface of the plaster in general. When the shellac is dry it is well also to brush over these fillings with a coat or two of flat paint as that will assure a uniform surface. If this is not done the spots coated with shellac may produce a higher gloss on your finishing coat than the balance of the wall—in other words, the wall will have a spotty appearance with shiners on it.

The decoration of walls is always more permanent and satisfactory if it is delayed for two or three months to allow the new smooth plaster to mature. In the present day schemes of operation, however, this is not always possible. The next best procedure, then, is to coat the walls first with a wash made by dissolving 4 lbs. of zinc sulphate crystals in 1 gallon of water. This will neutralize any active alkali spots which would have a tendency to destroy the binder in paint and to cause a change in some colors to faded flat spots.

Sometimes new plaster on hard finished walls is too soft and it chalks off excessively. In such cases if water is applied generously with a brush, or sponge, until the surface is soaked the plaster will dry with a harder surface in four or five days time.

Old Smooth-Finish Plaster.—The preparation of old walls is accomplished in much the same manner as described for new walls except that as a rule there is more cutting out and filling of cracks, holes and damaged places.

Too much stress cannot be put upon the importance of doing this preparatory work thoroughly, because when this work is slighted time is lost later on the job trying to touch-up and overcome defective fillings,

or to hide imperfect places which should have been filled during the preparatory operations.

Whether an old wall must simply be washed or whether the old paint requires much scraping are matters which call for the exercise of good judgment based upon experience.

The preparatory work for calcimine invariably includes washing off the old calcimine rather than "topping-over" the old material with a new coat.

When canvas or other wall fabrics are to be applied, careful examination should be made to be sure that the old paint and size coats are firmly attached. It is seldom safe to put on fabrics over a gloss oil sized wall without removing the size or at least without applying a coat of flat paint on top of the size. Fabrics will not adhere to the surface very long when pasted on to gloss oil size.

New Rough-Finish Plaster.—The first operation in this work is to brush down the surface with a broom to remove all loose sand and plaster particles.

New walls that have not been allowed to stand a month or two, which time is required to neutralize the alkali of the surface, should be given a wash coat composed of 4 lbs. of zinc sulphate crystals dissolved in 1 gallon of water. This will offset the tendency of hot, alkali spots in the plaster or the causticity of cement walls to burn the life out of the paint binder and to cause fading in spots of some of the colors.

On sand finish, rough cast and stucco walls, varnish size is not suitable. Glue size having greater strength than is permissible on smooth plaster walls is required to bind together any loose sand on the surface and to stop suction. It is a good plan, however, to brush on a coat of oil paint before the size, or to use the oil and glue size mixture given in Chapter V. If glue size is put on next to the bare wall it may cause paint which is put on top of it to scale in case dampness

should get into the plaster. When glue size, which is water soluble, is put on between coats of paint it is protected from moisture.

Old Rough-Finish Plaster.—The preparation of this kind of surface usually calls for no more work than washing down to remove surface accumulations of dust and smoke, the starch coat, if any was used on it, and also the glaze coat of water stain if that character of decoration was used before.

The preparation and filling of cracks and holes in this surface is covered later in this chapter.

New Wall Board Walls.—The use of this material in many instances includes the application of wood moldings over the seams. If, however, the seams are not to be covered with wood strips it is wise to follow the directions given by the wall board manufacturers for filling up and leveling such seams. Before a first class job of this kind can be secured it is essential that the walls built of 2 x 4 studs shall have been done in the particular manner required for this work. This means that bridges are essential under all butted joints, back of the wall board at the top of baseboards, plate rails, chair rails and picture moldings. Furthermore, it means that nothing but straight studding can be used on such jobs.

Even after all of these precautions have been taken and after the wall board has been firmly nailed in place, there are some types of this material which expand and contract sufficiently, between the times when a room is heated and when it is not heated, to break joints which are most carefully made, concealed and covered with canvas. Some types of wall board made of plaster do not expand and contract to this extent. Furthermore, some types of such wall board material are made with beveled edges which allow a greater volume of putty or stopping-up material to be used

in the joints. Where board which is cut square at the joints is used the sections should not be butted too closely together. At least ⅛ of an inch opening should be allowed in order to receive enough putty to anchor itself.

The seams of such wall board should be filled with a special putty preparation made by the manufacturers of the board or with Swedish putty which is described in this chapter.

If the wall board used is of the type which will not expand and contract with changes in temperature it will pay to cover the entire surface with canvas, burlap or other fabric, but such fabrics will pull loose and bag over joints when put on over wall board which contracts when the winter heat is turned off.

After joints and nail heads are completely filled and allowed to dry, sandpaper them down level with the wall and clean the entire surface to make it ready to paint.

It is a good plan to put on a coat of thin paint first if a glue size is to be used. If a varnish size is to be used it may be put on as the first coat.

Old Wall Board Walls.—These surfaces should be treated in all respects the same as plaster walls as to washing and cleaning. Damaged places should be filled with a Swedish putty rather than plaster of Paris putty.

Old Painted Walls.—On most jobs of this kind the old paint is firmly attached to the surface and the essential preparatory work consists of washing to remove dust and smoke. The repairing of damaged places and filling of cracks should be done exactly after the same methods as were described for new work.

Concrete and Brick Walls.—Surfaces of this type, as a rule, are coated with mill white, calcimine, cold wa-

ter paint or one of the prepared flat wall paints, although they may be painted with oil paint such as is prepared for exterior or interior wood surfaces.

New cement surfaces which have not been allowed to stand a month or two should first be washed down with a solution made of 4 lbs. of sulphate of zinc to 1 gallon of water. The surface should be allowed to dry thoroughly a day or two before painting. The purpose of this wash is to neutralize the causticity of any active alkali on the surface.

The next step in painting concrete surfaces and the first step on brick surfaces is to brush them down thoroughly with a broom to remove any loose sand or plaster. After this operation the walls may be painted in exactly the same manner and with the same materials as are used for wood surfaces.

Washing Walls and Ceilings.—This might seem to be quite an ordinary operation requiring no explanation and yet there are quicker and better methods than might commonly be used by the inexperienced.

To a pail of warm water add a little mild soap or linseed oil soap, a small amount of washing powder or sal soda, a little flour, a little glue or paper-hanger's paste. This water solution should then be brushed on to the wall with a large calcimine brush. After one wall has been covered with the water and has stood two or three minutes go back to the point of beginning and with a clean sponge and a pail of clear water proceed to wash off the surface. The flour paste and glue in the mixture will hold the soapy water on the surface long enough to dissolve the dirt.

Some decorators simply dissolve glue in hot water until a slightly sticky mixture is made—a weak solution. It should be just strong enough so that when the fingers are dipped into it and allowed to dry they will feel slightly tacky. This glue size is brushed on to the wall, allowed to stand two or three minutes

and is wiped off with a sponge and clean water. When the walls are very dirty, as on surfaces back of radiators, it is necessary to add a little sal soda to the water solution.

Walls in kitchens which are usually coated with a thin film of grease require a stronger glue size solution which also has more soda or washing powder in it. The addition of a little vinegar or ammonia in water for this purpose makes the job easier.

Walls which have been starched to protect painted, glazed or mottled and blended surface colors should be washed with clear warm water only. Walls of this type are given a starch coat to protect them and when the washing is properly done it is not necessary to repaint the surface. Often the surface can be so well cleaned by washing that it will pay to starch them again.

Removing Old Wall Paper.—In performing this task considerable care must be taken to avoid too much injury to the plaster surface. The common procedure is to soak the paper with water, using a sponge for the purpose. Then, a broad scraper, similar to a putty knife, is used to scrape off the paper as fast as the water soaks in.

When there are several thicknesses of paper the job is more difficult and the water must be applied many times. Occasionally on old buildings it will be found that some of the layers of wall paper have been varnished and then, of course, the water will not penetrate. With this condition there apparently is nothing to be done except to scrape the paper off as best you can with the putty knife scraper.

When the plaster has been damaged in many places, by removing the paper, it is usually necessary to brush on a coat of shellac over the entire surface after the cracks and holes have been plugged with putty as described elsewhere. The new coats of paint will soak

into portions of the wall where the plaster has been considerably scraped and will leave flat spots in the finish.

In treating such a wall some decorators prefer to fill all the holes and cracks, coat over such fillings with shellac and then give the entire wall a coat of varnish size. This will make a surface with a uniform suction and one which can be easily painted.

A thorough washing of the walls should be given with warm water and a little sal soda or washing powder as soon as all of the wall paper has been scraped. This washing removes any of the old paste or glue size which has been left on the surface.

A careful covering of the floor and baseboards is essential when removing wall paper because the patterns on such paper are sometimes printed with water soluble inks. Such coloring matter is released by the water and will run down over wood trim and on to the floor, staining such surfaces unless they are protected and wiped dry immediately.

Removing Old Calcimine.—This material should be removed by washing in the same manner as was just described for washing walls and ceilings.

The removing of calcimine from rough finished walls is very difficult, but it is not necessary to remove the material, except when it has shown a tendency to scale off. Then, it is necessary only to remove the calcimine from areas which have begun to scale. A coat of oil paint will have a tendency to bind old calcimine to such a surface and it is, therefore, not necessary to wash it all off.

Removing Gloss Oil Size.—For many years it has been customary to use a gloss oil size on walls in preparation for a calcimine job. As long as the size is firmly attached to the surface there is no need to remove it for repainting or calcimining. If, however, the wall is to be redecorated with wall paper, canvas,

muslin, burlap, oil cloth or other fabrics it is not safe to place any of these coverings on top of gloss oil, because they will not adhere to the surface for any reasonable length of time regardless of what kind of a paste is used. The safe procedure is to remove the gloss oil first.

To accomplish this the gloss oil may be dissolved by washing it with a strong solution of sal soda—washing soda and hot water. The soda should be completely dissolved in hot water and a little glue or paper-hangers' paste may be put into it to keep it from running off or drying too rapidly. Brush this solution on to the gloss oil size after the old calcimine has been washed off. Use an old wall brush for applying the water, as this strong solution will injure the bristles of a good brush. When the solution has been allowed to work on the size a few minutes, wash it off thoroughly with a sponge and clean warm water. A good precaution to take also is to add a little vinegar to the final washing water and that will neutralize the causticity of any soda left on the surface.

A method commonly used for treating gloss oil coated walls before hanging wall paper or fabrics is to brush on one coat of flat paint thinned only with turpentine and tinted a desired color. It is really cheaper to brush on such a coat of paint than to remove the gloss oil size because of the labor cost and time.

With your paint coat fairly dry, the next step is to put on a sugar size. This size is made by dissolving common dark brown sugar in warm water to make only a fairly strong solution. Use only enough sugar in the water to make it slightly sticky when the fingers are dipped into it and allowed to dry. This size should be brushed on and when it is dry the surface is ready to be covered with wall paper or any of the fabrics.

Scaling Paint.—It is not often that paint cracks and scales on interior wall surfaces, but when it does there is some question as to whether a surface is safe to paint over again. For instance, where paint has scaled it can usually be traced to the use under the paint of glue size which was too strong. Glue size should never be strong enough to form a solid film of glue over the surface, but rather strong enough only to enter the pores and seal them up without forming a continuous film.

Paint scales sometimes because water has gotten into the plaster and destroyed the anchorage of the paint film.

It is seldom necessary to do more than to scrape off loose paint scales and sandpaper down the surface to remove rough edges. Then, the bare spots should be shellaced and when dry one or two coats of flat paint should be spread upon these spots. When paint upon a plaster surface has scaled in large areas and must be removed there are but two ways to do it practically—the use of a blow torch to burn off the old material or the use of a liquid paint remover. In either case a considerable amount of digging and scraping with knife scrapers is likely to cut through the glazed surface of the plaster. These scraped surfaces will be more porous than the balance of the wall and your new coats of paint will dry flat in these spots. To overcome the inequality of suction in such a wall some painters use varnish size made as described elsewhere in Chapter V. Others brush on two coats of thin orange shellac in order to equalize the surface.

Cleaning and Cutting Out Cracks and Holes.—When called upon to redecorate walls in nearly any building which has been in use for some time, the decorator finds more or less repair work to be done. There will be large and small settlement cracks, due to shrinking of the lumber frames of the building or the founda-

tion. He also finds holes of various sizes in the plaster which have been occasioned by the removal of partitions or shelves and the damage done by furniture, etc. Occasionally such damage to plaster is great enough to justify employing a plasterer to do the repair work. Too often, however, it is not possible to secure a plasterer when needed for this work and the decorator himself must do the work. If the plaster is loose in areas a foot or more in diameter, it should be removed and be replaced with new plaster using the same material and methods as are employed by plasterers. The plaster can be secured now in dry form already prepared to mix with water and trowel into place.

Close inspection of cracks in plaster will usually reveal the fact that the plaster bulges out beyond the general level of the wall on one or both sides. The first step, therefore, is to cut away the bulging plaster down to the lath until a straightedge or rule placed across the crack shows that both sides of the opening are not higher than the general level of the wall. In some cases it is necessary to cut out the crack an inch or two wide. When the crack has been cut out and cleaned, using a putty knife, the surface should be smoothed up by rubbing with No. 0 or ½ sandpaper covering a block of wood. Care must be taken to avoid rubbing the surface too hard or you will cut through the hard glaze produced by the plasterer's troweling. Rub the surface only enough to smooth it up thoroughly.

When repairing such cracks or holes in a surface it is necessary to cut away the under edge of the plaster more than the surface edge. What you want to do is to produce a V shape crack with the point on the surface;—the opening of a crack or hole is less on the surface than on the side next to the lath. This is done so that when new putty or other filling mate-

rial is put into the crack or hole it is wedged in place like a keystone. Plate 2 illustrates this manner of cutting and cleaning.

If there is time, coat the edges of cracks and holes with linseed oil and let the oil dry. If there is not time to do this soak these cleaned out edges with water before filling with putty.

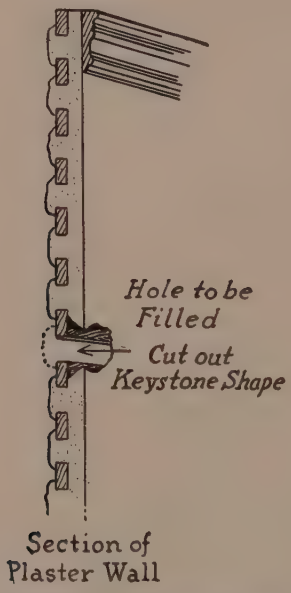


Plate 2.—Cutting Out a Plaster Hole and Filling.

In cutting out and cleaning holes there should be no sharp points or loose plaster near the opening—the hole should be made approximately round and the cutting should continue until the plaster is firm on all sides of the opening.

Sometimes cracks are filled without taking the precaution of cutting out and shaping the opening. This

is a bad practice and usually the filling is quite as unsightly as the hole.

As a rule, a fairly large filling in cracks will adhere to the surface better than one which is too small. By opening the crack a little wider the break in the surface becomes less apparent.

Putty Mixing and Use.—The skillful use and mixing of putty for many purposes is a subject which is deserving of more thought and interest than is apparent today. Too often painters and decorators use indiscriminate mixtures of putty for all kinds of surfaces and conditions.

The skilled craftsman knows how to mix a putty which will dry just as fast as is necessary to accommodate his work, one which is soft and porous when dry or very hard; he mixes putty which can be sandpapered freely to make a smooth and level surface, a putty which can be rubbed with pumice stone and water to a fine finish, or one which can be knifed on for a heavy filling or for a thin surfacer.

As a general working rule to follow, it is well to keep in mind that putty should be mixed as nearly as possible of the same color, texture, degree of intensity and hardness of surface as the material into which it is placed as a filler. A very soft porous putty should not be used for stopping up holes in very hard dense surfaces, and the reverse is equally true, that very hard drying, dense putty should not be used to stop up soft, porous surfaces.

There is much to be said about using the right kind of putty in the right place. Disappointment is sure to result, for instance, from using whiting and linseed oil putty for filling cracks in hard surfaces where a quick job is to be done and with only one or two coats of paint. Such a putty dries slowly and the oil from it will stain coats of paint and disfigure the job. This is especially true where an old putty

is used on interior surfaces finished with flat coats of paint. In these cases the sweating of the putty results in shiny spots in the paint and discoloration; in some cases the paint may scale off.

Formulas for mixing putty are innumerable. The common putty which you will secure from hardware stores and paint stocks generally, made up for window sash, is usually marble dust. This putty may be good enough for barn sash, but it gets hard and brittle shortly and will not remain in place. A little white lead, paste or dry white lead, added to this putty makes a better material.

The use of a straight whiting and linseed oil for plugging cracks and nail holes on exterior surfaces is a bad practice.

First Class Putty.—The common way to make a first class putty for ordinary outside work is to take a small quantity of white lead paste from the keg and add dry whiting to it until a stiff mixture is secured on a slab. Pound it a while with a mallet or club. Then the putty is taken into the hands and kneaded until a thorough mixture is secured. If the mixture gets too dry and thick, add a few drops of linseed oil. If you want a putty which will dry very hard and adhere even more firmly to a surface, add a few drops of hard-drying varnish—floor varnish or good spar varnish.

Such putty is colored to match paint, or stained interior wood trim, by adding tinting colors in the dry form.

Window Glass Putty.—The common putty made by mixing a fine quality of bolted whiting and a little white lead with linseed oil is good for glazing window sash, but for glazing steel sash a putty should be mixed from dry red lead and linseed oil.

Knifing Putty.—For repairing damaged places in walls and woodwork a putty which is to be spread on

and smoothed with a putty knife may be mixed by adding white lead paste to fine bolted whiting to make a stiff putty with equal parts of Japan gold size, linseed oil and turpentine. This putty is made thin enough to be applied with a broad putty knife to rough places and smoothed up. When it is dry the rough edges can be sandpapered and the whole patch rubbed down level.

When a very hard drying, knifing putty is wanted, and one which can be rubbed with pumice stone and water, it may be mixed by adding to white lead in oil paste enough fine dry whiting and fine pumice stone to make a stiff putty. When a liquid is needed a few drops of any hard drying or rubbing varnish or Japan gold size will serve the purpose.

Swedish Putty.—What is called Swedish putty is made by decorators when large quantities are needed for filling many large cracks in floors, in plaster walls, and for making special wall finishes. Swedish putty is made with varying proportions of several ingredients. One way to make it is to start with a bit of paint mixed for outside wood surfaces—a lead paint or ready mixed gloss paint. To this is added a bit of dry whiting, or dry calcimine, a little glue dissolved in hot water, a little dry color, and in some cases a bit of dry China clay. In some cases paperhanger's flour paste is added. A composition of Swedish putty depends largely upon what working qualities you wish, how hard it is to dry and how rapidly it is supposed to dry.

Quick-Setting Putty.—On jobs which are to be puttied and then followed up within an hour or two with paint the putty may be best made by mixing a stiff paste with dry white lead and Japan gold size. Add a few drops of turpentine if a quicker drying putty and one with a more porous texture is wanted.

Another way to make a quick drying putty is by

mixing white lead in oil paste with dry white lead to a stiff putty, adding Japan gold size and floor or rubbing varnish.

Plaster of Paris Putty.—Probably more putty for filling holes in plaster walls is made from plaster of Paris than from any other material. This makes good filling material when properly used. The plaster of Paris should be submerged in water. Only a small portion, about the size of an egg, should be lifted from the water with a stopping knife and kneaded in the hand and made ready for placing in the hole. This material sets rapidly and it should be put in place before it has set. When in place it should be smoothed over repeatedly with the broad knife so as to glaze the surface, making it hard and non-porous like the plaster itself.

Some painters have the bad habit of lifting too much plaster of Paris from the water at a time and when it begins to set in their hand they add a little more water or vinegar. This should not be done. When a batch of plaster takes its initial set before placing it in the hole it should be discarded for a fresh lot taken out of the water.

For mixing a knifing putty to be used on plaster walls some decorators prefer to take a little prepared calcimine or other water paints and add dry whiting until the proper consistency for knifing is reached. These are handy mixtures, often, and they make a good filling which can be rubbed down smoothly with sandpaper. Care should be taken to be certain that plaster of Paris secured for making putty is fresh, otherwise it will not work properly.

Under certain conditions of temperature and ventilation plaster of Paris putty sets too rapidly for convenience in handling. To overcome this some painters add a small amount of vinegar or glue size to the water in which the putty is submerged, claiming that

this has a tendency to slow up the setting of the putty. This is a questionable practice to some extent, since there is some possibility that vinegar or glue breaks the bond of the plaster and makes it too brittle. What appears to be a better way to slow up the setting of plaster of Paris putty is to add a little slaked lime. Ordinary lumps of building lime may be soaked in water which slakes it,—then it will keep indefinitely submerged in water. This is a handy material to keep in the shop so that a small amount may be sent out on each job.

Crack and Hole Filling.—Assuming that the holes and cracks in the plaster wall have been carefully cut out and cleaned and the type of putty to be used has been selected, the next consideration is tools. Probably an ordinary putty knife is most often used for putting the putty into position in holes and cracks, although a broad scraping or stopping knife is really better. A still better tool is one made by cutting out a flat wood paddle shaped like a steel putty knife or scraper. The wood stopping knife is better because it does not leave marks such as follow the use of steel blades.

As a rule putty will shrink some and for that reason it is customary to fill holes in two stages. The first filling is put in place and fills the holes entirely except within about ⅛ of an inch from the top of the surface. The putty should be pushed in thoroughly to pack the surface. Some decorators prefer to add a little sand to the putty for this first filling.

When your putty has become thoroughly dry the second filling should be made and smoothed up carefully to be level with the balance of the wall. With sand finished or rough walls a little fine or coarse sand should be mixed with the putty for the final filling also. Obviously, however, no sand should be used in the final filling on smooth plaster walls.

It is important to smooth and work over thoroughly the final filling in a hole or crack not only to assure getting a well filled and smooth job, but also to put a hard glaze on the putty which will be equal to the glaze on the balance of the plaster. When plaster is thoroughly glazed by troweling it is not so porous and absorbent and will not cause flat spots in the paint which result from the absorption of the oil in the paint. It is customary to brush over plaster of Paris putty fillings with water several times before the putty sets hard. The water will help to make a smooth job and to cement the putty more closely to the edges of the old plaster.

Filling cracks and holes in sand finished or other rough finished plaster requires much more skill and patience than for the same operations on smooth plaster. Many decorators claim that a perfect job of filling on rough walls cannot be done. This is not true when the proper methods, tools and materials are used. The material needed is one which sets a bit more slowly than straight plaster of Paris putty. It may be plaster of Paris putty to which dry whiting has been added; it may be Swedish putty or one of the several other mixtures which are suitable. Care should be taken to add to the second filling of putty on rough walls some sand which is about as coarse as that composing the wall. It is necessary that you make the patch look as nearly like the surrounding wall as possible because a smooth patch cannot be covered with paint and made to look like the balance of the wall.

The first filling of putty should be put in place as usual and, like the second filling, should be placed carefully enough to avoid putting any of the putty on to the wall surrounding the hole or crack. If the putty gets on to the surrounding surface it simply fills up the rough character of the wall and makes

an unsightly smooth area. After carefully putting the second filling in place stipple it with a small bristle brush in order to rough it up. In some cases a steel wire brush or coarse whisk-broom is the proper tool for stippling. The final operation is to take the clean brush and brush the surface all around the hole or crack toward the center of the filling so as to wipe out any excess putty which may have accumulated on the surface surrounding a hole.

It is not well to sandpaper new fillings of putty on either smooth or rough plaster walls unless absolutely necessary. Sandpaper cuts off the glaze from the surface and makes a porous patch which will absorb oil excessively and make a light or dark spot appear on the finished job, unless after sandpapering a coat or two coats of paint have been brushed on over the filling. As a rule, it is possible to smooth up a patch sufficiently with a wood knife blade to make sandpapering unnecessary.

A coat of shellac and two coats of flat paint on top of new fillings helps to hide them on smooth plaster walls, but these coats should not be put on fillings in rough plaster walls. If the walls are to be painted a couple of very thin coats of flat paint, but no shellac, may be used on rough walls.

For the final filling on smooth or rough walls it is customary among some painters to make a fine glazing putty by mixing dry whiting into white lead and oil paste until a stiff putty has been made. Then, a few drops of Japan drier should be added to make the putty work properly under the knife. Obviously, considerable mixing and kneading of the putty, with the hands, is essential to securing the proper kind of putty. Usually this putty mixture is made on a stone slab and is pounded with a mallet for thorough mixing. This mixture is also used in a little thinner consistency for filling surface scratches and scraped places

on the wall. Such a mixture may be sandpapered lightly when it is dry.

When large patches of plaster are inserted by a plasterer, using the regular lime plaster mixtures, the patches may constitute hot spots the causticity of which may cause certain colors in your paint to fade out quickly. The causticity of such a new surface may be removed by brushing on to the new plaster a solution made by mixing 4 lbs. of sulphate of zinc crystals and 1 gallon of water. After such a wash the surface should be allowed to dry thoroughly; then a coat of thin shellac should be brushed on. When the shellac is dry one or two coats of thick flat paint ought to be spread onto such spots before the whole wall is painted.

Covering Small Surface Cracks.—Some old walls show rather numerous small cracks, cracks which are too small to cut out and fill with putty. These may be large enough to absorb oil from your paint coat and cause dark streaks to show up on both sides of the cracks. Such fine cracks can be filled and covered by coating them first with thin shellac then with a coat or two of flat paint before painting the whole wall. If the shellac only is used without paint your new coat of paint may show "shiners" above all the shellaced places.

For the filling of surface cracks caused by furniture bruises and nail scratches a glazing putty is also made by mixing together dry whiting, warm glue size and plaster of Paris to make a stiff paste. Then, a little rubbing varnish is added until the mixture works smoothly under the knife. Such a putty can be put on to fill the cracks even above the level surface because it can be sandpapered down smooth. Such putty does not set too quickly, it doesn't swell or shrink and may be worked out to a very thin edge when properly mixed. This putty dries very hard but is

not used for a large filling because it sets rather slowly. It is a good putty for glazing over porous areas of the plaster which have been made by scraping or sandpapering until the old glaze on the plaster has disappeared.

On some walls fine hair line or fire cracks are very numerous. Since they are too small to be filled individually the best treatment is to coat the wall all over with a material which will fill them up and stop suction from the cracks. Some painters use for this purpose a coat of boiled linseed oil with which about one-quarter turpentine has been mixed.

If the cracks are a little larger they may be filled with any thick flat paint which can be put on with a putty knife. The pigment which has settled in the bottom of prepared paint cans is suitable or white lead thinned with a little turpentine will serve the purpose. This thick paint is put on to the surface with a putty knife; fill the cracks and then scrap off all excess material.

Sometimes a glue size will fill such fine cracks satisfactorily while in other cases it is necessary to put on a coat of varnish size mixed as described in Chapter V.

Filling Wall Board Joints.—With most brands of wall board a special mixture of putty is sold by the manufacturers of the board. This should be used in preference to other mixtures although Swedish putty, described in this chapter, will serve the purpose.

With those types of wall board which have beveled edges the filling operation is not difficult, because a rather large body of putty is put on. In the case of wall board which has square edges butted together the joints should be at least one-eighth of an inch open.

When Swedish putty is used for a filling the joints should first be given a coat of paint and then the

putty should be forced well into the cracks. The filling should be made with ample putty so that you will allow for any shrinking that may occur. When the putty is dry it can be sandpapered down level with the surface. One or two coats of thick flat paint on top of the filling will help to conceal the joints; although, of course, if the wall board has not been put on perfectly straight studding and has not been properly bridged under the picture moulding, plate rail, chair rail, and baseboard it is quite impossible to conceal the joints. When wall board has been properly nailed in place, when it is of a type that does not expand and contract with temperature changes, and when the joints have been properly filled they will be concealed indefinitely.

Stains and Discolorations.—Interior plaster walls sometimes show stains from water having leaked from the roof or the floor above, or it may be stains caused from water soluble aniline of colors of wall papers. Then, occasionally some old bricks are used in a wall which were formerly used as part of a chimney. Such bricks are saturated with creosote from smoke and this comes through in a stain on a plaster surface. The first treatment of stain should be a thorough washing to remove any surface accumulations. When the surface is dry one of three treatments is likely to be affected. Sometimes a coat of shellac or of varnish size will seal up the stain. Sometimes asphaltum varnish thinned with turpentine to make a size will accomplish the end sought. The most certain treatment is a coat or two of aluminum metal bronze paint.

CHAPTER V

WALL SIZING MATERIALS

The market offers many specially prepared wall size materials designed to serve under ordinary conditions; also some made for use on walls which present a surface condition which is out of the ordinary.

The ready prepared sizes which are made by reputable manufacturers and which are standard, advertised brands are as a rule first class materials.

Glue Size.—The use of a glue size on top of the first coat of paint is quite a general practice. It stops suction of dry and porous spots. This is not the very best practice, however. Another coat of paint makes a better foundation than glue size and costs little more.

When glue size is to be used it should never be mixed strong. A strong solution of glue and water will certainly cause paint to crack and scale off. In mixing the size soak first class glue in water for two or three hours; simply add enough water to submerge the glue.

Next boil the glue and water, stirring it enough to prevent its sticking to the bottom of the pail. When the glue has come to a boil, add enough hot water to it to make it very thin. No exact proportions can be given, because different brands and grades of glue vary considerably in strength. The glue size should be just strong enough so that it will feel slightly sticky

on your fingers after they have been dipped in and allowed to dry. It is much better to have your size too weak than too strong.

The object in sizing is not to spread a film of glue over the whole surface, but simply to put on enough glue to fill and seal up the pores of the surface so as to stop suction.

Glue size should be put on between coats of paint, not next to bare plaster. It is thus protected from moisture in the plaster.

Varnish Size.—A better size than that made from glue is mixed from first class interior varnish—coach or spar, thinned with turpentine and to which you add enough of the paint mixed for the finishing coat to offset the brown color of the varnish.

This size should be very thin. It will stop the suction of the wall and serve, to some extent, as a covering or hiding coat. The varnish size should be spread on after the priming coat. It should not be mixed too rich or it will dry with a gloss. One gallon of varnish and one gallon of turpentine make a size of about the correct consistency.

Varnish size should not be made from the cheaper suction, or ceiling varnishes, nor from gloss oil or hard oil. These products are simply mixtures of rosin and benzine, usually, and they do not make a satisfactory foundation for paint or canvas.

Sizes containing gloss oil may remain soft and tacky for quite some time; they may disfigure the paint and sometimes the rosin works up through the paint and remains tacky. Wall paper, muslin, canvas and burlap cannot be made to adhere permanently to walls coated with gloss oil sizes.

There are, however, some special brands of wall size prepared by manufacturers which have considerable merit and are satisfactory.

Varnish sizes of any quality should not be used on

sand-finished or rough-stucco walls. Glue, soap and sugar sizes are better for these surfaces.

For wall board a first class varnish size is better than a glue size and, generally speaking, high class varnish size is to be preferred, because it not only stops suction and seals up the pores but also serves as a coat of size and a coat of paint together. Varnish size is water proof and, while it may be spread directly upon the plaster, it is really better to place it between coats of paint.

Oil and Glue Size.—Hard finish and rough stucco interior walls are quite popular and probably always will be, because of their artistic merit. Such walls often have considerably more suction than smooth plaster walls. To seal up the suction on such surfaces before painting a good size may be mixed as follows:

A quantity of first class gelatine glue should be melted in hot water and brought to a boil. When the glue is about as thick as paint ready for the brush, add one gallon of raw linseed oil which has been previously made hot. A little dry color may be added to the size to bring it around to approximately your finished color, being lighter preferably.

Next cut up a bar of yellow laundry soap into thin slices and stir them into the hot glue and oil solution until they are thoroughly dissolved. This mixture can now be thinned with hot water to the right consistency for sizing.

The size should be a little thinner than cold linseed oil and, yet, somewhat thicker than glue size. It is better to brush this size onto the walls while it is warm. The walls should be first brushed down with a broom to remove loose sand.

A size mixed in this manner is water proof and will stop the suction of a wall sufficiently to permit finishing with two coats of paint. This size should be put

on to the plaster and not between coats. Oil and glue size is not suitable for smooth plaster walls.

Sugar Size.—A wall which has been coated with gloss oil size and which is to be covered with canvas, muslin, burlap or wall paper must be given some preliminary treatment. The gloss oil size can be scrubbed off, using strong sal soda water, hot, but this is a slow and tedious process.

The common practice is to give the wall or ceiling a coat of paint mixed largely with turpentine to dry flat and tinted to suit. When the paint is dry a coat of sugar size puts the surface in condition to be covered with fabrics or wall paper with reasonable assurance that the coverings will adhere to the surface.

Sugar size is mixed by adding dark brown sugar to water. Just enough sugar is put into warm water to make the solution slightly sticky. The strength of the solution should be tested by dipping the fingers into it and allowing them to dry. On top of this the paste for wall paper or canvas will gain good anchorage.

CHAPTER VI

PLAIN PAINTING AND ENAMELING

Prepared Materials.—For the decoration of interior wall surfaces a great many materials prepared ready for use are manufactured and there is extensive use today of both prepared materials and materials mixed by the decorator on the job.

When use is made of one of the prepared flat wall paints, of which there are several excellent brands on the market, the best results will come only by conscientiously following the mixing and application directions issued by the manufacturer of the particular brand of material which you are using. While the general composition of these materials is quite similar there are variations in the oil liquids, volatile thinners and driers as well as in the pigments which require slightly different working methods for the most advantageous use of each material.

Flat Wall Paint.—The characteristics of this class of materials are that they dry without lustre, except for a slight sheen to be noticed from direct light reflections. Such materials flow freely from the brush like varnish and level up to eliminate brush marks, laps and joints when the brushing is properly done. Flat wall paint sets rather rapidly and if brushed excessively will rough-up. Also, if you attempt to rebrush areas which have been coated only a few min-

utes before there is likelihood that you will rough-up the film.

The best grades of flat wall paint hide the surface often in a satisfactory manner with one coat, but usually two coats are required for the best kind of a finish. Some of these materials can be successfully washed while others are rather difficult to wash clean without showing streaks.

Generally speaking, flat wall paints are made from lithopone and zinc oxide in combination with other pigments and it is probable that the new pigment titanium oxide will be used in this connection. The vehicle used for flat wall paints is usually an oil which dries flat and which is a compound of China wood oil, treated linseed oil, or others with similar flatting ability. Varnish compounds which dry flat are also used as the liquid portion of flat wall paints. Such materials are made in white and in many beautiful colors.

Flat wall paints are not suitable for use on exterior surfaces, but may be used on any interior surface whether it is plaster, brick, wood, metal or one of the wall fabrics.

For the purpose of indicating what constitutes a high class flat wall paint the following U. S. government specification is of interest. The materials supplied under this specification must dry dead flat; they must be opaque coats which will adhere to wood, metal and plaster and which will withstand washing with soap and water; they must show no material change in color on exposure to the light.

(a) *Pigment.*—The pigment shall consist of:

	Maximum Per cent	Minimum Per cent
Lithopone	..	80
Zinc oxide	10	..
Tinting and extending pigments	10	..
Material soluble in water	0.8	..

Note.—The Lithopone used must contain not less than 26 per cent of zinc sulphide and must not darken on exposure.

(b) *Liquid.*—The liquid portion of the paint shall consist of treated drying oils or varnish, or a mixture thereof, and turpentine or volatile mineral spirits, or a mixture thereof, in such proportions as to insure not less than 25 per cent of non-volatile vehicle. The non-volatile vehicle shall dry to a tough and elastic film.

(c) *Paint.*—The paint shall be well ground, shall not settle badly, cake, or thicken in the container, shall be readily broken up with a paddle to a smooth, uniform paint of brushing consistency, and shall dry within 18 hours to a dead flat finish without streaking, running or sagging and be free from laps and brush marks. The color and hiding power when specified shall be equal to those of a sample mutually agreed upon by buyer and seller. After drying for not less than five days, marks made on the painted surface with a soft lead pencil (No. 2 Mogul) shall be easily removed by washing with soap and warm water without appreciably marring the paint surface. The weight per gallon shall be not less than 14½ pounds.

The paint shall consist of:

	Maximum Per cent	Minimum Per cent
Pigment	72	68
Liquid (containing at least 25 percent non-volatile matter)	32	28
Water	1	..
Coarse particles and "skins" (total residue retained on No. 200 screen based on pigment)	0.5	..

Flat Lead Paint.—For a great many years white lead in oil thinned with turpentine has been used for the painting of interior walls largely because it makes a firmly anchored foundation paint film, hides the sur-

face well and constitutes a washable surface when the last coat contains a little oil to make a semi-flat finish. The last coat is usually stippled to help eliminate brush marks.

Flatting Oil.—During the last few years a product called flatting oil has been used with white lead extensively in place of turpentine. An interior wall paint made from white lead and flatting oil makes a firmly anchored paint film, one which hides the surface well and is washable.

For decorating interior walls with lower cost calcimine is, of course, a popular material which serves well enough as a temporary coating. Working methods for the application of calcimine are presented in Chapter VII.

Mill Whites.—The decorating of interior of factory buildings has become very much more popular of late, especially in such buildings as are used for the manufacture of food products. For very large industrial service of this character the class of materials known as mill white is used extensively. The composition of mill whites is quite different from that of calcimine and cold water paints with which the mill whites are commonly confused. Lithopone and zinc oxide ground in high grade treated oils are the principal constituents of this paint which is waterproof and is designed especially to reflect a great deal of light. Mill whites are made which dry with a full gloss, with a semi-gloss or with a flat finish. Gloss mill whites are washable. Flat mill whites are washable to about the same extent as other flat wall paints.

Enamels for Walls.—Enamels are sometimes used for finishing of plaster walls, especially on top of canvas or other fabrics. Perhaps the most common use of enamel for walls is in those instances where the walls of rooms are paneled off with mouldings. Between the mouldings canvas is placed and an enamel finish built

on top of that. Within the panels artistic wall paper is put on or some of the special wall finishes by the Tiffany mottling and blending process or stencil designs are placed.

Mixing Flat Wall Paints.—White and colored paints in this class come prepared ready for use on plaster, wood, metal, brick and cement surfaces. Such paints contain all necessary pigments, color, oil, turpentine and drier.

To use these paints cut the top of the can out with a putty knife. Pour the liquid off of the top into a clean pot and stir the pigment in the bottom of the can until it is soft and well mixed. Next, pour back a little of the liquid into the pigment and continue stirring until it is absorbed. Repeat this operation until the paint is all mixed. Next, pour the whole batch from one pot into the other several times and stir until all pigment has dissolved in the liquid.

Mixing White Lead Paint.—Paints for all purposes to be mixed in white and colors from white lead as a base are made ready for the brush in this manner:

White lead comes to you in thick paste form; in tubes; 1-pound, 3-pound and 5-pound cans; 12½-pound, 25-pound, 50-pound and 100-pound steel kegs; 300-pound and 500-pound wood casks. It contains 8 per cent pure raw linseed oil and 92 per cent white lead. One hundred pounds of white lead paste bulks about 2.85 gallons.

To break up this thick paste, place the amount needed in a clean pot or tub (an empty 100-pound white lead keg is good for mixing two- or three-gallon batches). Now add a very little linseed oil (or turpentine) and stir it into the lead. It is important that you put in not over one-fourth of the oil at first; less is better. When the first lot of oil has disappeared into the lead, add a little more and repeat until all the oil needed to bring the paint to stout

brushing consistency has been added by thorough stirring with a paddle or in a machine mixer.

With the paint in this condition, add the necessary turpentine (and Japan drier if raw oil is used), also the colors, which have been previously mixed with oil and strained.

It is important that this method be followed, as it is the only economical way to mix the paint correctly. If too much oil is put in at first, little gobs of lead paste will swim around in the oil and dodge your mixing paddle for some time. The proper time to mix paint is when it is in thin paste form. If this is well done the balance of the oil can be easily and quickly stirred into the batch.

The addition of a handful of fine pumice stone F. F. F. to a gallon of wall paint mixed for the first coat on smooth walls makes the second coat cover better. A slightly rough surface is thus produced and holds more pigment on the surface.

The mixing of other paste paints can be accomplished to best advantage in exactly the same way.

Dry white lead is not used by painters and decorators for mixing paints. It is first ground through stone mills with oil by the manufacturers.

Mixing Lead and Zinc Paint.—Various combinations of white pigments are used, as well as white lead, as the basic material for white and light-tinted paints. In some instances a leaded zinc combination made by manufacturers is used, and in others painters and decorators mix together white lead paste and zinc oxide paste, both ground in linseed oil.

The mixing and thinning with oil or turpentine is best accomplished by exactly the same method as was described for breaking up white lead paste. Break up the two pigments separately and when each is nearly thin enough for brushing mix the two together by pouring one into the other and then boxing the

whole batch; that is, by pouring the paint from one pot to another several times.

The turpentine, drier and colors (the latter being first mixed thin separately with oil or turpentine) should next be added, if colored paint is to be mixed; if not, simply add the final quantity of oil (or turpentine for flat paint) needed to thin the paint to brushing consistency.

The proportions used when mixing lead and zinc paint vary according to the purposes for which the paint is to be used. For interior paints the question of durability doesn't enter, when mixing enamels, enamel undercoats and paints; but for exterior house paints which are subjected to temperature changes, sun, wind, rain, hail and frost, too much zinc may make a paint film so hard and inelastic that it will crack and scale off. White paint used on the sea coast and subjected to moist, salt air continually is especially in need of 15 or 20 per cent of zinc to 85 or 80 per cent of white lead.

When mixing these two basic white pigments it is important to remember that zinc, being finer than white lead, bulks much more per hundred pounds and requires more oil to thin it to brushing consistency. On an average, zinc paste is ground with 15 to 19 per cent of linseed oil to 85 or 81 percent of pigment; while white lead is ground with 8 per cent of oil to 92 per cent of pigment. One hundred pounds of pure zinc oxide bulks about 4⅛ gallons, while 100 pounds of white lead bulks a little more than 2¾ gallons.

Zinc oxide is marketed in steel kegs and pails of various sizes—12½-pound, 25-pound, 50-pound, 100-pound—and in small tubes for artists and decorators.

Consequently, care must be shown in mixing quantities of white lead and zinc oxide pastes ground in oil, if correct proportions are to be maintained.

Below is a tabulation which shows the quantities of

each pigment, in pounds of paste, to mix together to make 100 pounds of combination paste of any given proportions. In other words, the dry pigment of such a paint mixture will analyze as per the proportions shown in this table:

Proportions Desired	Use Zinc Oxide in Oil	Use White Lead in Oil
20.0% Zinc....80.0% Lead	21 lbs.	78 lbs.
22.5 " ....77.5 "	23 "	76 "
25.0 " ....75.0 "	26 "	73 "
27.5 " ....72.5 "	29 "	70 "
30.0 " ....70.0 "	31 "	68 "
32.5 " ....67.5 "	34 "	65 "
35.0 " ....65.0 "	36 "	63 "
37.5 " ....62.5 "	39 "	60 "
40.0 " ....60.0 "	41 "	58 "
42.5 " ....57.5 "	44 "	55 "
45.0 " ....55.0 "	47 "	53 "
47.5 " ....52.5 "	49 "	50 "
50.0 " ....50.0 "	52 "	48 "
52.5 " ....47.5 "	54 "	45 "
55.0 " ....45.0 "	57 "	43 "
57.5 " ....42.5 "	59 "	40 "
60.0 " ....40.0 "	61 "	38 "
62.5 " ....37.5 "	64 "	35 "
65.0 " ....35.0 "	66 "	33 "
67.5 " ....32.5 "	69 "	30 "
70.0 " ....30.0 "	71 "	28 "
72.5 " ....27.5 "	75 "	25 "
75.0 " ....25.0 "	76 "	23 "
77.5 " ....22.5 "	78 "	21 "
80.0 " ....20.0 "	81 "	18 "

Straining Paints and Colors.—There are several advantages to be gained by straining your paints and colors, no matter how well they are mixed. Straining paint through fly screen or, better yet, through a finer mesh screen or cheesecloth breaks up the particles of pigments more completely and incorporates them with the oil or other liquid; straining removes sediment, small particles of dried paint skin and foreign substances. By straining you mix paint which not only is cleaner and will make a finer textured film, but

you are thus making a paint which hides the surface better and works out more smoothly under the brush.

Straining of paint is not only an advantage when it is first mixed, but high-class painters and decorators will strain the same batch of paint two or three times

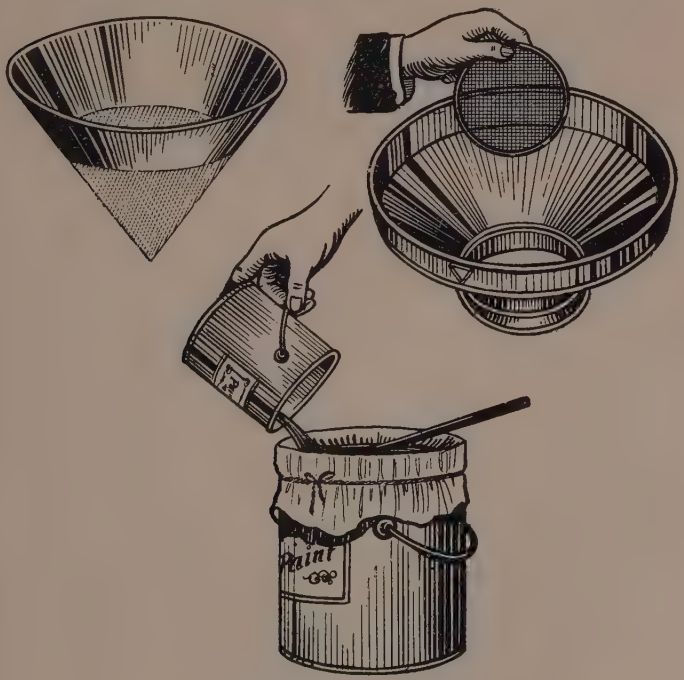


Plate 3.—Paint Strainers.

a day when they are doing fine enamel, undercoatings or other particular work. You may start with a perfectly clean paint pot and strain into it a batch of paint which is clean and fine. Then you may take a brush which has been made absolutely free from dust, loose hairs and old paint skins; but after you have used this brush in transferring the paint to wood trim or other surfaces for an hour or two you will find

that the brush has picked up more or less dust and grit particles from corners and crevices and carried this foreign material into your pot of paint. In varnishing and enamel work it is highly important also that you strain the material often.

The straining may be done by using one of the manufactured strainers shown on Plate 3, or you may tie a double thickness of cheesecloth on top of a paint bucket as tightly as possible with twine; then pour the paint, varnish or enamel to be strained on to this cloth and stir it with a putty knife or mixing paddle until it has passed through the cloth.

Drawing the Oil for Dead Flat Finish.—In past years considerable white lead thinned only with turpentine has been used for mixing undercoats for white enamels, for painting woodwork in flat white and colors, and for painting interior walls. For some of this work the lead was first mixed with a little benzine and allowed to stand over night. In the morning it was found that the 8 per cent of linseed oil with which the lead paste was ground was extracted largely by the benzine and was floating on the top. All of the liquid was then poured off and the lead was mixed with fresh turpentine and produced a dead flat paint.

Special preparations of zinc and lithopone are now made for enamel undercoats and for flat finished walls. Also special liquids, called flatting oils, are mixed with a lead paste. When lead is not used for the walls one of the many brands of special flat wall paints on the market is used.

Types of Wall Brushes.—There are certain preferences among decorators for one type of brush or other, but these are based largely upon what a man has become accustomed to. As to size, brushes 4 inches and 4½ inches wide are used for most walls, except when a calcimine brush is needed.

Plate 4 shows a high class flat wall brush with a

beaver-tail handle, bound with a metal ferrule and made of Chinese bristles. Made in half-inch sizes from 3 inches to 5 inches with bristles 4⅛ to 4⅞ inches long depending upon width. The 4-inch brush

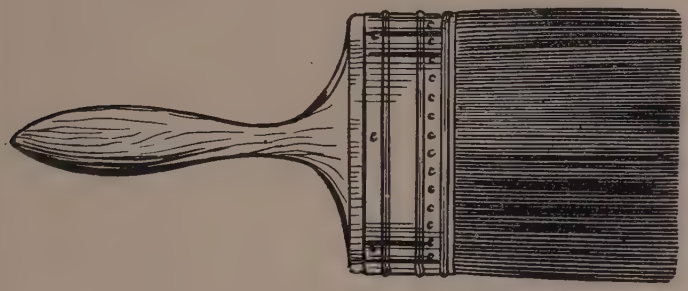


Plate 4.—Flat Wall Brush, Metal-Bound.

comes with bristles 4⅝ inches long. It is vulcanized in rubber or equally hard cement compositions for best service. A good brush for spreading all kinds of paints on any kind of large surfaces, but it is not

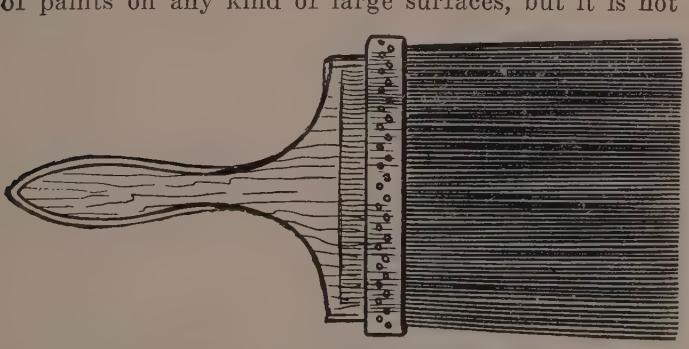


Plate 5.—Leather-Bound Stucco Brush.

wise to use it for varnishing. It is made also with handles of pointed or peerless shape.

Plate 5 shows a leather bound stucco flat wall brush in common use. It is made with a rather thin handle which is more comfortable for some men to use.

Leather bound brushes of high quality contain more bristle stock than metal bound brushes. Made in ½ inch sizes from 3 inches to 5 inches wide. Some decorators prefer very long bristles in this brush, but others do not. A brush 4 inches wide is probably satisfactory to most mechanics when the bristles are 4¾ inches long. It is suitable for the application of all paints to large surfaces, but not for varnishing.

This brush is preferred by many to have a cement setting and the bristles should extend through the entire depth of the leather strap. What are called solid center or plugged stucco brushes are not as good as those made with full thickness of bristles. Chinese bristles are best for these brushes.

Correct Brushing Methods.—Paints mixed to dry flat or semi-flat on interior wall surfaces have a different action under the brush than oil paints mixed for outside surfaces. This is true whether your paint is one of the prepared flat paints or a painter-mixed paint from white lead and turpentine or flatting oil. As a matter of fact, close observation will soon convince one that each of these wall painting materials has peculiarities of its own which must be taken into consideration when the finest of results are to be expected.

Then, there are peculiarities also of surface, temperature and ventilation conditions which influence the rapidity of drying and consequently the care necessary in the brushing of the paint. A skillful brush hand knows how to manipulate his paint exactly to fit these varying conditions. He is master of the situation and knows how to apply his paint to avoid laps, joints, brush marks, streaks and "shiners," as the gloss spots are called, as well as "holidays" which are the places on the surface skipped by the coat of paint and careless brushing.

Oil paint mixed for exterior surfaces does not dry for a matter of hours and consequently it can be

brushed over and touched up some time after the painting has been done if any defects are found. On the other hand, with interior flat wall paints there is no surer way to spoil the appearance of the job than to go back and attempt to brush the surface a few minutes after it has been covered with paint, because this kind of paint sets rapidly.

Whenever there is any control of the lighting of the room it will pay to be particular to have good light when brushing on wall paints. Bright sunlight is, of course, the best for this work. Particular care must be taken in painting ceilings if an absolutely uniform color is to be produced.

Wall paints mixed to dry flat and semi-flat set so quickly that the surface becomes quite sticky a few minutes after brushing on the paint. Consequently, it is well to mix your paint as thin as possible and yet have it cover well. Having done this flow on the paint in as full a manner as possible, as you would enamel or varnish. In other words, it is well to flow on as much paint as the surface will hold without showing runs and sags after the paint has been laid off and smoothed up with a brush. The reason for this is that thin paint flows together and levels up better than thick paint and it is this flowing and leveling which eliminates brush marks, joints and laps. It takes quite a little experience to know how far you can go in thinning the paint and yet have it hide the surface well and avoid runs, sags and wrinkles.

The procedure which has proven most practical in painting a wall may be described in this manner: Your paint pot should be not more than half or two-thirds full. The brush commonly used is a 4-inch flat wall brush of the ordinary coarse hog bristles. Sometimes a 4½-inch brush is used. The brush should be dipped into the paint only about an inch or two and wiped out on the mixing paddle or the edge of the

pot to remove surplus paint. This should be repeated two or three times while working the brush into the paint at first.

As a rule the brushing should be started in the upper left hand corner of the wall and continued to work from left to right and from the ceiling to the floor. A stretch of new paint is carried down from

Plate 6.—The Correct Way to Hold a Brush.

the picture moulding to the baseboard only about a foot or two wide, depending upon the size of the brush and how rapidly the material sets.

It is commonly considered that an up and down stroke is preferable to cross strokes from left to right. The up stroke will lay more paint on to the surface than the down stroke. Also you will find that it is

easier to stroke lightly coming up than down. It would not do, however, to use only up strokes; both are necessary. Care should be taken to avoid extending the fingers down below the metal ferrule on the brush and also to avoid pressing too hard,—"riding" the brush as the painters call it. This latter habit causes the paint to leak over the handle of the brush and where the fingers are allowed to extend too far down the side of the brush too much pressure is exerted on the center bristles and they wear excessively. Then, you have a brush which is shaped like a fish tail and which will not do the best of work.

Plate 6 shows the correct way to hold a brush. Begin painting with a stretch of paint about 1 foot wide. Dip your brush into the pot only about 1 inch and slap out the excess material on the side of the pot. Every brush is designed to carry a limited amount of paint. When too much paint is loaded into the brush some of it is bound to run off over the handle or to spatter on the floor. Carry the brush full of paint to the surface and coat in an area about 1 foot square quickly and roughly aiming simply to transfer the paint to the surface. After that go over it again immediately with light strokes of the bristle ends to distribute the paint better and lay it off smoothly. Finish by using semi-circular up and down strokes. Before leaving this area all brushing should be done that will ever be required.

Dip your brush again into the paint and carry it to the surface to coat in another foot or two below the area just finished. Brush this on roughly, then lay it off and smooth up the surface just as you did the first area being careful to join up the second and first areas carefully to avoid having the joint show. Continue brushing in this manner until the stretch is brought down to the baseboard. Then begin a new stretch at the top of the wall.

The object in carrying down only a narrow stretch of paint is that by so doing you will reach the bottom sooner and start the second stretch before the right hand edge of the first stretch becomes very dry. In other words, your aim should be to so brush the paint that both edges will be wet all the time. This

Plate 6A.—Another Correct Way to Hold a Brush.

method should especially be observed when painting around a window. The wall area above the window will naturally be coated in first. Then, it is necessary to bring down a narrow stretch of paint on each side of the window at the same time. Then, you must work first on one side and then the other—a brushful

on the left side and a brushful on the right side until you reach the bottom. You will soon learn to work in this manner to keep all edges wet and that is very necessary if bad joints and laps are to be avoided on the finished job.

You should have no concern about the small brush

Plate 6B.—Working the Brush Into the Paint.

marks which show in the wet paint. These, as a rule, will disappear as the paint flows together and levels up while drying. If, however, you attempt to go back to an area finished a few minutes before to smooth up places which show brush marks, you will rough

up the surface and make it look worse than if you had allowed it to stand.

As to the amount of brushing permissible, you must learn this from the particular material you are using. Only enough brushing should be done to have the surface properly covered and the paint evenly distributed. Excessive brushing will rough-up some paints by causing the pigment to pile up. A good brush hand soon learns to flow his paint on, lay it off and let it strictly alone. This is important because flat paints dry without gloss only when an excess of pigment is left on the surface. Too much brushing brings the oil to the surface and causes a glossy finish.

When joining-up a new stretch with the one done previously, it is desirable to accomplish the brushing with a very light touch and by making every stroke slightly semi-circular rather than straight up and down. The straight up and down strokes are best for transferring the paint quickly and roughly to the surface but the semi-circular strokes are essential to laying off and smoothing up the finish.

On large ceilings it is advisable to use two or three men brushing at the same time in order to have the second stretch come along while the edge of the first stretch is wet.

If the edge of one stretch does set a little too much before the second stretch comes along to join up with it you can often make a good joint by using the brush on the set edge in sort of a wiggle stroke manner; then, of course, the paint should be laid off with a semi-circular stroke. In this manner the wet paint of the new stretch can be lightly spread over the partly set edge of the old stretch. By a wiggle stroke is meant laying the brush nearly flat on its side and while pulling it along the surface it should be made to wiggle or wave a little on the first stroke or two.

While brushing paint on to a ceiling it is difficult

at times to avoid having the brush leak down over the handle and spatter on the floor, walls or wood trim. This may be due to the use of a poorly constructed brush which does not have the flag ends of the bristles properly distributed or which may not contain first class bristles. Leaking, on the other hand, may also be due to loading the brush with too much paint. Every brush has a certain capacity and there is nothing gained by dipping it too deeply into the paint and picking up too big a load.

As a rule, the leaking of a brush is traceable to the manner in which it has been cared for or is being handled. If a brush is kept in an oil bath and is not made thoroughly clean and dry before dipping it into the paint for use on a ceiling it may leak. The best of brushes will sometimes leak and it is difficult to understand why.

Some painters habitually coat-in ceilings, walls, and wood trim without spattering any paint to speak of, while others are excessively careless about this. When a painter is not thorough and careful enough to avoid spattering the least he can do is to see that everything is carefully covered with drop cloths and to see that he has always clean wiping cloths with which to remove spatters of paint before they dry. Working in this manner will do much to overcome the bad impression made in former years which has given painters the reputation of being mussy and disorderly workmen.

Stippling Paint.—Paint which is mixed to dry flat or semi-flat, particularly that which is composed of white lead and turpentine or flatting oil, is commonly stippled on the last coat only in order to eliminate bursh marks and give an even texture to the whole surface. Stippling is not really necessary when flatting oil is used but it gives an attractive texture.

As a rule, when stippling is done one man works spreading on the paint while another follows imme-

diately with a stippling brush and pounds the surface of the wet paint evenly as indicated by Plate 7. The stippling brush most commonly used is that shown in the illustration and it comes in two sizes. One size is about three inches wide and eight inches long; the other size is 3¼ inches by 9⅝ inches. The bristles

Plate 7.—The Stippling Brush and How It Is Used.

in both brushes are very long, usually from 3¼ to 4 inches.

When stippling small areas which cannot be reached by the large brush a small, clean duster brush can be used.

Paint which is to be stippled is usually mixed rather stout for the second or stippling coat. In using white lead paint the last coat is mixed, as a rule, with about half boiled linseed oil and half turpentine and of a rather thick brushing consistency. When an unusu-

Plate 7A.—Spray Gun Painting Plain Surfaces.

ally rough finish is wanted add a little more Japan drier and after the paint is thoroughly mixed throw in a hand full or two of dry plaster of Paris to each gallon of paint before it is brushed on to the surface. Then mix it fairly well.

When a coat of paint is to be stippled it is not necessary to take as much care in brushing or laying it off because the stippling brush will distribute the paint evenly and at the same time eliminate the brush marks, laps and joints. Extreme care must be taken, however, to avoid skipping any places with the stippling brush and also to avoid stippling the same place twice to a certain extent.

Gloss and Flat Patches.—Occasionally when a wall has been painted with material mixed to dry flat gloss spots or shiners will appear, due to too much brushing of the paint in places or to the fact that shellac was brushed onto fillings or scraped places in the wall without taking the precaution of also brushing on a coat or two of flat paint to shellaced spots.

Such gloss spots can often be removed by wiping over them with a cloth soaked in sour milk. There is just enough acid in the milk to cut the gloss. No doubt the milk leaves a very thin film over the spots wiped.

Sometimes gloss spots can be removed after the paint has set but before it is dry by brushing on lightly cold water to the spots. The practice of wiping over such spots with paraffin wax dissolved in turpentine is sometimes indulged in, but if the gloss spots are very large or numerous the use of wax is not to be recommended. Later on if paint is put on over the wax there may be trouble with scaling.

A coat of starch or of buttermilk brushed on to the whole wall is sometimes used both to remove gloss spots and to leave a film on the surface which will protect the paint from dust accumulations.

Starch-Coating Walls.—This is a practice which deserves much wider use. It has been customary for many years among high class decorators to finish fine wall decorations with a coat of starch which protects them from dust and smoke accumulations to the extent that when the walls become soiled they may readily be washed with clean water. Then, it will be found that the dust and smoke accumulations have lodged on the starch coat and that the paint coat after washing is as fresh and clean as when first put on.

Buttermilk is sometimes used in place of starch to serve this same purpose and both of these coatings are transparent to the extent that you would not know that they were present if they are properly applied. The starching of the walls adds a more uniform appearance also by removing the gloss spots.

Sometimes an entire wall surface finishes up with more gloss than was wanted and in that event a starch coat will tone it down, giving a flatter appearance.

The starching of walls is an inexpensive treatment which deserves wider use and it should be remembered also that a well painted wall may be starched a second time when it has been washed clean and carefully.

The starch used for this purpose is the ordinary laundry starch used in homes. A handful of starch should be put into a pail with just enough cold water to dissolve all of it. When the starch is all in solution pour on to it a little boiling water until the starch becomes thick and of a jellylike consistency. The starch will be perfectly clear when it is mixed in this manner and the next step is to pour cold water into the mixture until it is about as thick as milk. Your starch coat is then ready to brush on to the wall with an ordinary flat wall brush.

Some decorators prefer to add just a pinch of dry color to the starch to tint it slightly like the wall

color. The dry color should be mixed in to the starch before the final thinning and should be thoroughly stirred.

Unless the above method is followed the mixing of a starch coat may give trouble. When cold water only is used the starch is not cooked and it turns to a white powder on the wall;—then it is not transparent.

Should your starch coat creep and crawl on a wall having quite a little gloss you should first wipe down the wall with a cloth dampened with benzine. Such a treatment is better than to add a bit of vinegar to the starch as is customary among some decorators.

It is unwise to use a starch coat on walls or a ceiling, in particular, which have been painted with only one coat over an old surface of rather dark color. When you have finished painting the surface may look well and evenly covered but you may be sure that there are thin places, laps and streaks in the coating. When a starch coat is used on such a surface it emphasizes all of these thin places like laps and joints and causes them to show up prominently. Starching on a two- or three-coat job and especially upon fine jobs of decorating in plain colors or Tiffany mottling and blending is well worth what little it costs.

The starch coat should be stippled with an ordinary stippling brush the same as a paint coat.

STANDARD FORMULAS FOR WHITE PAINT

NEW PLASTER WALLS

If the walls have not stood for several weeks or months, and painting is to be done immediately, a wash should be brushed on to neutralize any hot lime spots which might burn the life out of oil or cause the paint to discolor. The wash should be mixed by dissolving about 4 pounds of sulphate of zinc crystals in

1 gallon of water. When the surface is dry brush off any powder or dust that may be loose on the surface.

First Coat

100 lbs. of pure white lead
5 gal. pure boiled linseed oil
1 gal. pure turpentine
Makes about 8¾ gal. of paint

Size Coat

In order to save coats of paint it is customary to seal up the surface with a size which should be placed on top of the first coat of paint and not on the bare wall. This is especially important where glue size is used. If glue size, or other water soluble size, is used on top of the plaster instead of between coats of paint, dampness in the walls later may cause the paint to scale off.

It is not wise to seal up the pores of a plaster wall by placing on it immediately a size of gloss oil, hard oil, suction varnish or shellac, because this may make an unstable foundation. It may stand a while, but when the wall has been painted two or three times, scaling may result. Furthermore, should you want to cover the walls in later years with canvas, or other wall fabrics, the fabric will pull off of the surface, bringing the coats of paint with it. When the first coat is oil paint you secure an anchorage in the surface which is very important. The directions for mixing size coats will be found in Chapter V.

Second Coat

100 lbs. pure white lead
1½ gal. pure boiled linseed oil
1½ gal. pure turpentine
Tinting colors
Makes about 6 gal. of paint

Finishing Coat—Flat

100 lbs. pure white lead
2½ to 3 gal. pure turpentine
Tinting colors
Makes about 5½ to 6 gal. of paint

Finishing Coat—Flat

100 lbs. pure white lead
2 to 3 gal. of flatting oil

Finishing Coat—Semi-Flat

100 lbs. pure white lead
1½ to 2 gal. pure turpentine
¾ gal. white enamel varnish, or
1 gal. pure boiled linseed oil
Tinting colors
Makes 5 to 5½ gal. of paint

Finishing Coat—Semi-Flat

100 lbs. pure white lead
¾ gal. white enamel varnish
1½ to 2 gal. flatting oil

Finishing Coat—Gloss

100 lbs. pure white lead
3½ to 4½ gal. pure boiled linseed oil
1 pt. pure turpentine
Tinting colors
Makes 6½ to 7½ gal. of paint.

If the new wall has been covered with canvas, use the above formulas also.

OLD PLASTER WALLS

Mix your paint for old plaster walls, and canvas covered walls which have been painted before, the same as specified for new plaster walls, omitting the first coat and the size coat.

Use of Flatting Oil.—In place of linseed oil, turpentine and mixing varnish, a flatting oil may be used with white lead and zinc for flat and semi-gloss finishes. This paint is suitable for interior wood surfaces as well as for plaster and cement.

First Coat

Mix the same as previously specified for new or old wood, interior trim.

Second or Finishing Coat—Flat

100 lbs. of white lead
2 to 3 gal. flatting oil
Makes 4¾ to 5¾ gal. of paint

Finishing Coats—Semi-Gloss

100 lbs. of white lead
¾ gal light mixing varnish
1½ to 2 gal. flatting oil
Makes from 5 to 5½ gal. of paint

ENAMEL ON PLASTER AND CANVAS

These coats should be the same on new and old plaster and canvas as would be commonly used for an ordinary painted surface. Very little oil should be used in the first coat and the second coat should dry flat or semi-flat. Following are the proportions commonly used and the working methods needed for this class of work.

First Coat

100 lbs. pure white lead
3 to 4 gal. pure boiled linseed oil
2 gal. pure turpentine
Makes 7¾ to 8¾ gal. of paint

Allow at least twenty-four hours for drying; putty nail holes; sandpaper when the putty is dry and wipe off dust from the surface.

Second Coat

100 lbs. pure white lead
1½ to 2 gal. boiled linseed oil
1½ gal. turpentine
Makes about 6 gal. of paint

Or the second coat may be mixed this way:

100 lbs. pure white lead
2 to 3 gal. of flatting oil

The second coat is to be rubbed down smooth with fine sandpaper after it has been allowed to dry at least 24 hours. Wipe the surface clean to remove dust.

Third Coat

50 lbs. pure white lead
50 lbs. pure zinc oxide
3 to 3½ gal. turpentine
1 qt. white enamel
Makes about 7 to 7½ gal. of paint

Or, the third coat may be mixed this way:

50 lbs. pure white lead
50 lbs. pure zinc oxide
3 to 4 gal. of flatting oil

Allow the third coat to dry twenty-four hours or longer. Sandpaper very lightly with fine paper or steel wool and wash up with a cloth dampened with benzine to remove dust.

Fourth Coat

First class prepared white enamel should be used as it comes to you in the manufacturer's can, or

thinned slightly with 1 pint of turpentine per gallon of enamel. The turpentine should be well mixed into the enamel, using an absolutely clean paddle. The room should be warm and the enamel not colder than 70 degrees, for proper brushing qualities. At least 48 hours should be allowed for drying and a longer time is of considerable advantage. This coat should be rubbed very lightly and evenly with No. 00 sandpaper, steel wool, or a wad of horse hair for rubbing will be sufficient if the surface is very clean and smooth. Wash up, being especially particular to make everything clean and ready for the final coat.

Fifth Coat

High class prepared enamel should be used for this coat, without thinning. It should be not colder than 70 degrees temperature. Flow the enamel on with a full body, but being careful to lay it off so that there will be no runs, sags or wrinkles. It is better to brush it out too thin than to put it on too thick and to have it run and sag. You cannot spread enamel out like oil paint. It must be flowed on. Diligence and watchfulness, as well as extreme care in brushing, are essential. Once an area has been coated with enamel and the material laid off, you should not go back to it or you will cause a roughing or piling up of the material. Enamel will level itself and flow together, so there need be no worry about brush marks.

The enamel used may be of the kind that drys with a full gloss or you can purchase what is called eggshell gloss, or satin finish, enamel to give a semi-flat hand rubbed appearance.

Enamel on Old Plaster or Canvas.—The same methods as were described for new work are suitable for old paint surfaces which are in good condition but simply soiled. The old surface should be washed and

then begin the enamel method with the second coat omitting the first coat and the size coat.

Enamel on Flat Wall Paint.—One kind of enamel job commonly done is built up after a two-coat job of prepared flat wall paint. The third coat is mixed from one-half flat wall paint and one-half high grade zinc enamel. The finishing coat should be composed only of first class zinc enamel.

Flat, Semi-Flat and Gloss.—The prepared enamels of high class are commonly made to dry either with a semi-flat mat finish or with a full gloss. While it is possible to rub a gloss enamel with pumice stone and water on a felt pad or a brush to produce a hand rubbed effect, this is not commonly done as it is more convenient to purchase material made to dry semi-flat.

Colored Enamels.—Many of the high class enamels are now prepared in several colors and it is better to purchase such materials already colored if the shade wanted can be found. If you want to mix a particular color it can be done by tinting high class zinc enamel with Japan colors. The Japan colors should be thinned first with turpentine and carefully strained. Then, they may be added to the enamel and they should be thoroughly mixed. There are some enamels of the pyrolin and other rapid drying lacquer types which cannot be colored except by the manufacturers.

CHAPTER VII

CALCIMINE METHODS AND MATERIALS

Since the old time method of whitewashing walls the use of calcimine has improved considerably, the methods have changed and materials have been much improved. Some years ago calcimine, or what was called distemper paint, was used in fresco decorating. For many years calcimine was used principally for decorating ceilings while the side walls were covered with wall paper or oil paint. It was customary also to use only white calcimine at first; later colors were introduced.

For a number of years painters mixed their own calcimine from whiting, dry colors, glue and water. That kind of material is seldom used today. The prepared calcimines of the cold water or hot water types are much more uniform in quality and color; they are more convenient to use.

The hot water types of calcimine must be mixed with boiling water and they are most extensively used, but it is sometimes inconvenient to secure hot water for this purpose in new buildings. The calcimine after being mixed must be allowed to cool off before it is used.

Calcimine of the cold water type is also extensively used today because of the time saved in preparing it for the brush. Very cold water should not be used for

the mixing, however, to secure the best results. Water which has had the chill taken off is best.

Calcimine Pigments.—The basic pigment used in making calcimine today is usually dry bolted whiting. In former years dry zinc was used as the basic pigment in the very high class work. The fine grades of whiting are most suitable for mixing calcimine—grades designated as "extra gilders" and "XXXX gilders" are in common use. If the whiting used is too coarse the calcimine will not hide the surface well.

Whiting is found on the market in dry lump form and also in a form which is called bolted. Bolted whiting is the same material after the lumps have been crushed and the pigment has been sifted through very fine silk bolting cloth into a dry powder form.

Binders for Calcimine.—The best material with which to bind the calcimine pigments together in common use is white glue. This comes in flake form and in the form of coarsely ground particles.

Manufacturers of prepared calcimine use not only glue binders but casein.

Colors for Calcimine.—In order to tint white calcimine to various colors finely ground dry tinting colors are added to the whiting pigment bases. Oil colors are not suitable, of course. Distemper colors may be used for this purpose since they are simply dry colors ground in glue and water to a paste form. The distemper colors are used for fresco water painting and for graining. The dry colors commonly used for calcimine purpose and which are listed in the supply catalogs are the following:

BLACK

Graphite
English Powdered Drop Black
American Powdered Drop Black
Swedish Black
1-lb. and 25-lb. packages and barrels

LAMP BLACK

Coach Painters', in 1-lb. papers
Germantown, in 1-lb. papers
Germantown, in ½-lb. papers
Germantown, in ¼-lb. papers
1-lb. and 40-lb. packages and barrels

GREENS

Union Chrome, medium or dark
No. 3 Chrome, medium or dark
Paris Green
Bottle Green
Bronze Green
Olive Green
1-lb., 25-lb. and 100-lb. packages

VENETIAN REDS

York Venetian Red
Craydon English Venetian Red
Regent English Venetian Red
1-lb. and 100-lb. packages

REDS

Indian Red, Super
Oxide of Red
Permanent Red
English Rose Pink
English Rose Lake
Turkey Red, Light, No. 2
Turkey Red, Deep, No. 3
English Vermilion, in 30-lb. bags, Light and Dark
Agricultural Vermilion
American Vermilion
Tuscan Red
1-lb. and 25-lb. packages

LAKES, ETC.

Carmine, No. 40
Geranium, AA
Vienna
No. 16 Lake
1-ounce and pound packages

YELLOWS

C. P. Chrome Yellow, Light, Medium or Dark
Genuine Chrome, Light, Medium or Dark
Dutch Pink
1-lb., 25-lb. and 100-lb. packages

YELLOW OCHRES

Chrome Ochre, Light or Dark
Imported Golden Ochre
Imported French Ochre
Rochelle Ochre
1-lb., 25-lb. and 100-lb. packages and barrels

BROWNS

Vandyke Brown
Raw or Burnt Turkey Umber
Raw or Burnt American Umber
Raw or Burnt Italian Sienna
Raw or Burnt American Sienna
Bismarck Brown (red)
1-lb. and 25-lb. packages

WHITES

Extra Gilders' Whiting, lump or bolted
Zinc, French Green Filler
Dental Plaster Paris
1-lb., 25-lb. and 100-lb. packages and barrels

BLUES

Celestial Blue
Cobalt Blue

S. P. Prussian Blue
Soluble Blue
Ultramarine Blue, H. B.
1-lb. and 25-lb. packages

Calcimine Mixing.—When using calcimine made by manufacturers ready for use the directions on the package should be followed closely. Such materials contain all ingredients and you simply have to add water.

Calcimine is usually mixed in galvanized pails rather than wood because wood absorbs glue. The decomposition of the glue fouls the pails in the summer weather. It is essential that you have clean pails and brushes for this work.

Although very few painters mix their own calcimine today there is some advantage in knowing how it should be done.

All surfaces are not alike in color, texture and degree of suction, nor are the factors of temperature and ventilation the same. For these reasons it is necessary to temper calcimine mixtures to fit the exact condition under which you are working. The painter-mixed calcimine is mixed by putting dry whiting into a metal pail and covering it with water of normal temperature to soak over night. This is very desirable but it is not absolutely necessary to allow the whiting to soak so long. The wet mass of whiting should be well stirred until the lumps are smoothly broken up. The dry color ought to be soaked in a separate pail in water.

The white glue to be used for the binder should be soaked in cold water so that it will be reduced to a soft jelly consistency. Because there are variations in different brands of glue it is difficult to specify the amount of glue needed, yet it is important that just the right amount be used. When the best quality of white glue is used about 1½ ounces to each pound of dry whiting

makes about the right strength. It is better to use high quality glue in a small quantity than to use larger amounts of cheap glue.

When your whiting, dry color and glue have all been soaked in water pour off the water which has not been absorbed by the glue. The glue in this condition should be about of the consistency of what we sometimes call trembling jelly. Add enough boiling hot water to thin the glue so it will pour freely. If the glue is too thick and strong the colors in the calcimine may dry with a gloss. If the glue is too weak it will not bind the calcimine sufficiently to prevent it from dusting off.

Glue which has been mixed for any length of time takes on an unpleasant odor so it is advisable to mix it fresh each day. If you add a few drops of carbolic acid or oil of cloves fermentation of the glue will be retarded and the unpleasant odor reduced.

The dry color paste in water should be mixed with the whiting in water until you have made the tint wanted. The color looks quite different when dry than it does in the pail wet. There is also some change in color caused by the addition of the glue. Your color should be tinted by mixing up a little whiting with the tinting color and glue and spreading the mixture on paper or wood pieces which may be dried quickly by holding over a lamp, stove or radiator.

When you have mixed the tinting color into the whiting and have determined the color wanted the glue should be thinned with boiling hot water and added to the pigments while it is still hot. Only enough hot water should be added to the glue to make it pour freely and then it should be thoroughly stirred into the pigments before the final thinning with hot water.

In this connection it should be remembered that it is easier to mix dry pigment and a liquid quickly by placing the liquid in the pail and adding the dry pigment a little at the time while the mixture is being

stirred vigorously. Where a little liquid is added to a quantity of dry pigment lumps are formed which swim around in the liquid and are difficult to break up with a paddle.

It is necessary to mix calcimine to rather a thick brushing consistency in order to make it hide the surface completely in one coat. With this material one thick coat is much better than two thin ones because it is necessary to pile up a considerable volume of pigment on the surface in order to hide it and avoid brush marks. In other words, your method with calcimine is opposite to that needed for the mixing of oil paint.

There appears to be no way to determine how thick to mix calcimine for a given surface except by mixing and trying a brush full at a time on the surface until just the right consistency has been reached.

Calcimine for Large Surfaces.—The mixing and tempering of calcimine for large ceilings and walls requires more skill than for small areas.

One way to mix calcimine for the purpose of slowing down the setting and gaining better brushing qualities on large surfaces is to temper it as follows:

Add a package of cornstarch, such as is put up for table use, to 2 gallons of cold water. Stir the mixture while pouring the cornstarch into the water and until all lumps are broken up and the starch is completely dissolved.

Next, dissolve 2 tablespoonfuls of concentrated powdered lye in half a cup of cold water. Stir this until the bottom of the cup feels hot.

Now pour the lye solution into the starch solution and stir the mixture until brown spots begin to form and then continue stirring rapidly for about half a minute or a little more.

The heat from the lye will cook the starch thoroughly in about half a minute without the use of fire.

Mix your calcimine about as thick as the above starch

solution and then pour the starch solution into the calcimine.

Having the starch and calcimine mixed together, add enough warm water to make the mixture the correct consistency for the particular job you are about to do. Test the mixture by brushing it out on the wall to see if it covers properly and wait until it dries before deciding that it is right. Calcimine can be used thinner on sand-finished and other rough walls than upon smooth surfaces.

You cannot succeed by adding dry lye to the starch mixture. The lye must be dissolved in cold water and the above described method should be followed carefully, step by step, to assure success.

Brushing Calcimine.—For the application of calcimine to the average wall surface a large brush is needed. It is essential that this material should be put on to cover well and hide the surface with the least possible brushing and so a wide brush is needed. Such a brush carries a large amount of material to a surface and because of its width—6, 7 or 8 inches—it covers considerable surface with each stroke.

Plate 8 illustrates the two styles of calcimine brushes in common use. The ordinary flat calcimine brush of high quality is usually made of Russian bristles because only that kind of bristle is stiff enough for such a brush. Russian bristle is larger and stronger than Chinese bristle; it also grows with a broader flag end which naturally carries more calcimine. Russian bristle retains its stiffness in water better. There really ought to be no preference for color of bristles since the color has no bearing on stiffness, durability or the size of flag ends. Some brushes are made with yellow bristles, some with gray and some with gray bordered or encased with yellow. The yellow bristles are more expensive but no more valuable than gray.

As to length of bristles in calcimine brushes it is well

to secure such as are not too long. For a brush 7 inches wide bristles 5¼ inches long are correct. Brushes having longer bristles are apt to sacrifice stiffness and strength of bristles for length and that is a poor choice.

The best types of flat and Dutch calcimine brushes are vulcanized in rubber or compositions which are not solvent in water. The flat brushes are bound with a galvanized iron ferrule.

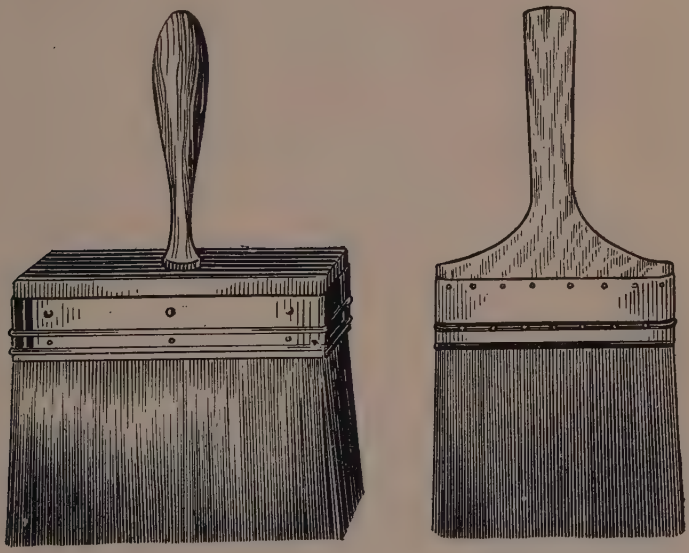


Plate 8.—A Dutch Calcimine Brush and an an Ordinary Calcimine Brush.

Dutch types of calcimine brushes are not so generally used as the flat but are much better for decorating rough plaster surfaces. They have greater capacity for carrying and holding material.

These brushes, too, should be made of heavy Russian bristles. Brushes made from such bristles mixed with Chinese bristles are not so good.

Dutch brushes are made with bristles gathered in

knots and also with bristles set continuously. The best brushes have bristles vulcanized in rubber or set in waterproof compositions. The common sizes are approximately these:—2⅜″ x 7¼″; 2-3/16″ x 7¼″; 1¾″ x 7¼″. A good length for bristles is 5 inches.

Calcimine may be rapidly applied to any surface with one of the first class spray guns. A saving of labor cost will also result as well as a first class job.

The point of beginning to calcimine a room is usually a ceiling and, of course, a corner is the place to start after seeing to it that as much light as possible floods the surface.

Dip the brush into the calcimine only about two inches and carry the material to the surface. Take care not to overload the brush to avoid spattering or having the material run down the brush handle.

Coat-in a strip of wall only about a foot or two wide and carry this stretch across the short way of the ceiling from wall to wall before beginning a new stretch. Of course, it is practical to coat-in a wider stretch when the calcimine mixture is just right to suit temperature and ventilation.

When too wide a stretch is carried across a ceiling or down a wall the edge becomes dry before you get back to the point of beginning to start the second stretch. Then the joint between the first and second stretches is likely to show a streak. Some workmen successfully carry a much wider stretch across. When an edge gets too dry, coat it lightly and deftly with clear water taking care not to lift the dry calcimine with the brush. Put on the water *before* the next stretch of calcimine.

Each stretch should lap each preceding stretch well to join the two and brush with the tip end of the bristles lightly to finish. No more calcimine should be put on to the laps than elsewhere. In fact, the same amount of material should be put on the whole surface, as

nearly as possible to gain the same thickness of film on the whole wall.

Unceasing vigilance is essential to securing a good job of brushing and a uniformly covered surface. Careless brushing causes the showing of laps, joints and thick and thin places.

The brushing procedure is the same for coating-in walls as for ceilings and it is well to begin in the corner next to windows and work away from rather than toward the light. The stretch should begin at the top of the wall on the left side; that will cause you to work from left to right. It is easier to carry a wide stretch down a side wall than on a ceiling. Ceilings are hot as a rule, even when the room below is moderate in temperature. Walls are usually broken up with windows and doors and that makes for easier brushing to avoid laps and joints.

When a calcimine job has been completed the drying should be hastened as much as possible by ample ventilation. A spotty appearance is likely to result from slow drying calcimine. During wet, cool weather and when a room is damp from any other cause a little artificial heat in the room is advisable.

Drafts ought to be avoided while brushing on calcimine. Drafts cause the coating to dry in streaks. But open the windows and doors when the brushing has been completed. Weather conditions influence the success of calcimine jobs considerably. When possible, choose a bright day not too warm for the work.

Calcimine on New Walls.—Even a first class job of calcimining cannot overcome the inequalities of unprepared surfaces. If all jobs of plastering were evenly troweled to produce a smooth glaze uniformly distributed over the whole wall area there would be less for the decorator to be concerned about.

But jobs must be taken as they come. Some are very hard glazed in spots from troweling, while in

other spots they are soft, porous and quite absorbent of liquids. Then on some jobs the plaster is uniformly mixed in large batches, while on others the mixing is indifferently done in small batches. Soft spots soak up the liquids from paints and produce dead flat spots. Hard glazed spots allow the liquids to remain on the surface with a gloss.

Careless mixing of plaster also causes the appearance of "hot" spots—accumulations of lime not completely slaked. These burn the life out of paint binders and cause some colors to fade quickly in spots. A wash over the whole wall made up of 4 pounds of sulphate of zinc in one gallon of water will neutralize such hot spots. The wash should be brushed on and allowed to dry before any further treatments is given the walls.

Some walls are quite smooth and others vary considerably in degree of roughness and texture. It is easier to produce a first class job on rough surfaces. The projections catch and hold more pigment than smooth surfaces do.

All these inequalities of surfaces have a bearing on the appearance of the finished job and the more care that is taken within reasonable limits to equalize differences and remedy defects the better for final appearances.

Calcimine may be brushed directly on to some surfaces without any undercoats. This is sometimes done to save expense. As a rule, however, unevenness of suction makes it necessary to lay on a coat of size before the calcimine is spread and after all preparatory work on cracks, holes and rough places.

The sizes commonly used are gloss oil made quite thin with benzine or turpentine. Hard oil or suction varnish are substantially the same as gloss oil. The size should be only thick enough, however, to dry with a gloss. Only very dry walls should be coated with

such varnish sizes. Glue size is better when walls are damp.

Sometimes walls are so smooth and glasslike that they are very difficult to hide with calcimine. Then a little dry plaster of Paris when mixed with the gloss oil size—about a handful to the gallon—gives the size a "tooth" or sufficient roughness to permit the calcimine to take hold.

For the mixing of sizes see Chapter V.

When the finest kind of calcimine job is to be done it is essential that a coat of oil paint be first spread onto the surface and given time to dry. The paint should be mixed to dry flat and tinted to the color of the calcimine, approximately. No size coat is needed over the paint as a rule.

Usually one coat of calcimine is sufficient to hide the surface on new work. Should one thick coat fail to cover and give a uniform appearance a second coat mixed thin may be spread by a skillful brush hand. The second coat must be deftly spread to avoid lifting the first coat on the brush, especially if the first coat is not strongly bound with glue.

When a wash of water, in which a little alum has been dissolved, is brushed on just ahead of the second coat it often prevents the lifting of the first coat.

Should the first coat be lifted and disfigured by the attempt to brush on a second coat, there's nothing to do but wash off all calcimine and take a fresh start.

Calcimine on Old Walls.—On these walls which have been calcimined before it is necessary to wash off the old coating as per Chapter IV.

There is no need to size-coat the walls again if they were originally sized with gloss oil or any other size which is not removed by the water. After the washing the new calcimine may be immediately brushed on to the surface, assuming that all cracks and holes have been repaired.

If glue size was used at first it may be necessary to coat the surface again with this or other size.

An old surface which was painted when last decorated and which is to be calcimined requires no other treatment as a rule than washing and repairing cracks and holes. A little warm water with soda will remove the grease and smoke accumulations so the new calcimine coat can take hold. On some jobs it is necessary to spread on a glue size over the paint before calcimining if the old paint is not in a firm and smooth condition.

What is called "topping over" is sometimes attempted; that is, to spread a coat of new calcimine over old calcimine which is in fair condition, but soiled, and without washing off the old calcimine.

This is possible only when the old calcimine is not considerably soiled, when it was well bound together with glue and when the new color is not greatly different from the old (it may be darker). Even then none but a very good workman can succeed. Often the brush will lift the old calcimine when you are attempting to spread the new. To spread water with a little alum in it just ahead of the calcimine coat will sometimes prevent this lifting. When the old calcimine is rather dirty the new coat simply smears the dirt around in streaks.

Everything considered it is unwise to attempt "topping over," even for low priced jobs. You might succeed, but if you run into trouble more time and labor cost will have been expended than if the old calcimine had been washed off in the first place.

Stippling on Calcimine.—Just as oil paint coats may be stippled so, too, may calcimine be finished. Two men are needed, one to brush on and one to handle the stippling brush to follow immediately while the surface is wet. A wall is so rapidly coated with the large cal-

cimine brush that one man brushing can usually keep two men with stippling brushes busy.

The stippling of calcimine is done substantially by the same method as was described for oil paint in Chapter VI.

Sponge stipple finishes are given in Chapter XII.

CHAPTER VIII

RADIATOR PAINTING AND DECORATING

Consideration of this work is given here because radiators are usually decorated today to match the walls of the room, and often with the same materials as are used on the walls.

Cleaning Radiators.—Accumulations of sand, rust and dirt must first be removed. For this purpose steel wire brushes are most convenient tools. Various shapes and styles of wire brushes are used, the principal shapes are shown in Plate 9.

Suitable Materials.—For many years it has been the custom to coat radiators with gold and aluminum bronze. And at times these two bronze colors were mixed together or other bronze colors were used. At first bronzes were probably used for decorative effect; later a theory was advanced which set forth as a fact that radiators coated with bronze, a metallic pigment,—radiated more heat than when decorated with other materials.

The latest tests made at the University of Michigan appear to indicate, however, that bronze coats on radiators reduce their ability to give off heat by about 25 per cent, as compared to radiators coated with prepared flat wall paints, lead paints, enamels and Japans. Such radiators as were not painted and those coated with these materials, other than bronzes, showed about the same radiating efficiency.

The results of these tests are important since they indicate that the area of radiating surface in a room may be increased 25 per cent simply by decorating radiators with some paint other than bronze.

In these tests it was found also that the greatest heat-

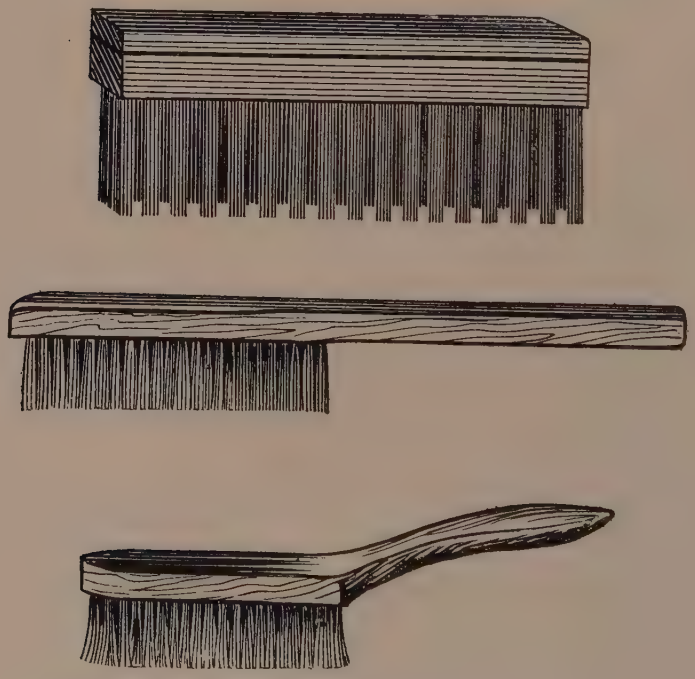


Plate 9.—Steel Wire Brushes for Radiator Cleaning.

ing efficiency was secured when the last coat was white zinc paint.

Glazing, Mottling and Blending.—Radiators are most often painted today the same color as the walls, but often on high class jobs they are given a further decorative treatment called glazing.

The ground coats for a glazed job are put on the

same as for plain painting. They must have a flat surface; that is, dry without gloss. The ground may be flat paint or bronze of any color. Ordinary bronzing liquids are used with the dry bronze powder.

When the ground coats are dry coat the surface with

Plate 10.—New Radiator Partly Cleaned for Painting.

a glazing color. Any of the transparent or semi-transparent colors are suitable—such colors as raw and burnt umber, raw and burnt sienna, Prussian blue, ultramarine blue, chrome green, Vandyke brown, Dutch pink, rose lake and many others.

The glaze color should be thinned to brushing con-

sistency with about one-fourth boiled linseed oil to three-fourths turpentine; or a flatting oil may be used for thinning.

The color is spread thin with a brush and is not supposed to hide the surface. The effect wanted is that

Plate 10A.—Radiator with One Flat Coat of Paint on It.

of having the ground color predominate with a thin sheen of glazing color over it.

After brushing the color over the whole surface, allow it to set two or three minutes, then begin to stipple the surface with a dry wad of cheese cloth. Wipe the color off of the high places where there is a decorative

design cast into the metal. Also after stippling all of the glaze coat wipe off streaks on the center of broad surfaces, having the darker glaze color on one or both sides as it was left in the depressions of ornamented

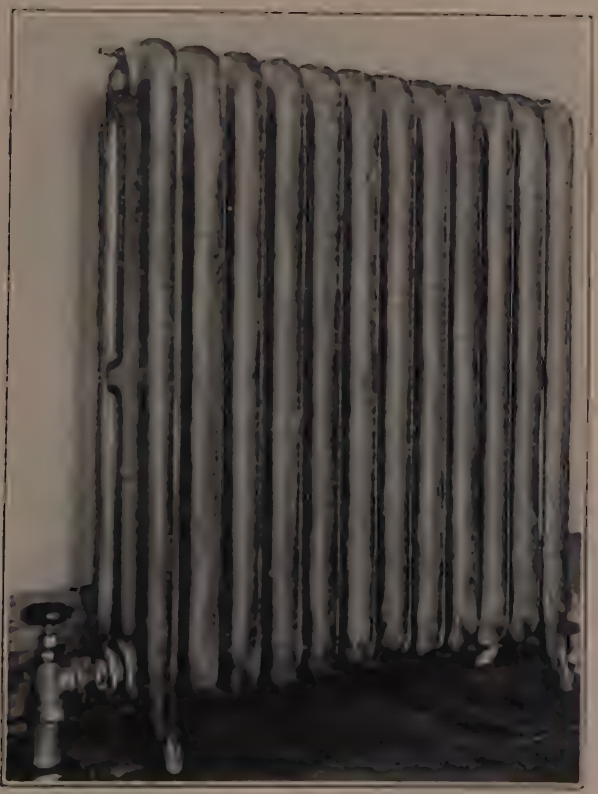


Plate 108.—The Job Glazed and Wiped Out for Antique Finish.

surfaces. This gives a pleasing antique effect. Plate 108 illustrates a radiator decorated with flat paint and then glazed and wiped out.

Some decorators prefer to use red lead thinned with

about one-quarter linseed oil and three-quarters turpentine for the first coat on radiators as on other metal surfaces. Then over this, a flat paint or bronze coats and glaze coats are spread.

When a smooth enamel job in white or colors is to be done on radiators it is customary to first-coat with red lead or one of the heat resisting prepared paints. Over this the enamel job is done as on any other surface and as described in Chapter VI. It should be remembered that any white enamel will turn yellow when used on radiators. If the heat is turned on moderately and gradually the first few times it will bake the enamel and retard the yellowing. When radiators are allowed to get too hot while the enamel is fresh it will cause sweating and perhaps blistering.

Plate 10C.—Painting a Radiator with a Spray Gun.

CHAPTER IX

STAINING ROUGH PLASTER

With the greater use of rough finished plasters has grown also the custom of staining such surfaces. Smooth finished plaster is not stained.

Rough plaster is commonly finished when new with only a stain coat. In other instances a glue or oil size is spread on and a coat or two of oil paint to dry flat is also applied before the stain.

Materials Needed.—Whether the stain is to be put on over unfinished rough plaster or after such surfaces have been given ground coats the stains to be used are the same.

A stain is needed which will not strike in and dry too rapidly to allow for nice wiping, mottling and blending. Any of the prepared stains of the oil type are suitable and for large jobs especially satisfactory. The water stains made from dry aniline powders are not so easy to handle on these rough surfaces as water stains made from dry pigment tinting colors, glue and water or from distemper colors and water. When such stain is used over a surface which has a bit of gloss or is greasy it may run and fail to attach itself to the wall. Then the addition of a little vinegar, soda or alcohol will overcome the difficulty.

Stains made from ordinary tinting colors ground in oil and thinned with about one-fourth oil and three-

fourths benzine are commonly used for staining plaster.

One of the English practices is the use of asphaltum (black Japan varnish) for making stains for these surfaces. The asphaltum is thinned with benzine and tinting colors ground in oil are added.

A stain for rough walls to give an antique effect is often made by mixing up a very thin calcimine. It is brushed on and wiped out in places to give a clouded appearance.

Still another stain which gives a very satisfactory and economical finish is made from dry colors, a bit of soda or lye, boiling water and a little pitch pine or dry rosin for the binder. This stain covers and hides the surface in one coat. When raw sienna is the color used in the stain a very rich effect is gained on rough plaster.

Wiping Out High Lights.—Stain coats on plaster are always wiped over in places to give a mottled or clouded effect. The wiping is done with a wad of cloth or sponge in such a way as to give an artistic unevenness like the play of light and shadow on the wall.

CHAPTER X

TIFFANY GLAZING, MOTTLING AND BLENDING

There is in evidence today what might be termed a renaissance of color. After a period of several years of popularity plain, flat colors on walls are gradually giving place to more colorful treatments. Blends of several colors and rough textures of various patterns have the ability not only to afford more artistic backgrounds for furnishings but also to sustain interest for a much longer time. They afford color, texture and pattern in a restrained, moderate degree which adds a subtle charm to all decorations when judiciously handled by the decorator.

The one disadvantage of these artistic finishes is the tendency of the less experienced decorators to be intemperate in their use of bright colors in large areas. Too often they forget that walls are not the principal decorative features of a room but only the background; that neither the colors, pattern or texture of walls should be strong enough to draw attention to themselves.

However, when decorators once understand that colorful, patterned and textured decorations must be correlated with the decorative plan of the room as a whole and use them in that manner, they constitute remarkably beautiful and artistic decorative means in the hands of capable craftsmen.

Perhaps, the greatest virtue of the glazing, mottling and blending process is its versatility. It is capable of being manipulated to produce wall color and texture effects to harmonize with all ideas of fitness. No matter what the character of furnishings or architecture wall decoration can be produced by this process to fit the need. Nor does it matter whether simple or elaborate, subdued or bizarre, conventional or novelty treatments are called for the glazing process can be manipulated to supply just the right color effect for the purpose.

And it is well to keep in mind that certain wall colorings and decorative effects can only be secured by the glazing, mottling and blending process.

Flat monotones on walls often become tiresome. Relief comes from painting the walls, which are really the background for furnishings, in variations of colors to give the interesting, mellow effects of light and shadow. This is precisely what the artist painter does in making backgrounds for his pictures.

Then there are many other instances where only glazed and blended colors can be used to produce the color effect needed. Suppose a bright, colorful yellow wall is needed to carry out the color scheme of a room effectively. If you mix a bright yellow opaque paint and coat the walls with it the effect will be so harsh and crude as to absolutely dominate the room, and unpleasantly, too. But, if you coat the walls in flat ivory white and glaze over with yellow lake or cadmium yellow in a mottled, blended treatment, you secure the brilliant yellow wanted in clouded areas but the wall color as a whole is restrained and harmonizes with the furnishings.

In a similar manner a peacock blue mixed in opaque paint covering a fairly large wall is quite impossible of harmony with the whole room. But mix a light ground coat opaque and flat by tinting zinc white with

ultramarine blue. Brush it on and let it dry. Then glaze over it with emerald green and you gain the colorful effect without crude, harsh and monotonous effects. It is the transparency of glaze coats as well as the clouded mottled effect of light and shadow which contribute such beauty of glazing.

The Effect Wanted.—Glazing may be described as the application of a coat of color or several colors which are transparent to a wall, wood trim, furniture or other surface. Literally glazing means to skim over a surface with a very thin coat of some material. Among decorators it usually means the use of transparent, not opaque, colors spread on a surface and stippled, wiped out or blended. It is the process called scumbling by English decorators. And, of course, a surface can be and sometimes is glazed over with opaque colors, especially when producing gray mottled finishes.

Where Glazing Is Used.—The popularity of this style of decorating is growing with remarkable rapidity. The modern home offers an excellent opportunity to decorate two or three rooms in Tiffany, so a considerable amount of business is to be had in every locality. Wall glazing is an appropriate finish in decorating the following rooms in residences and public buildings:

Apartment Buildings	Church Auditoriums
Living Room	Hotel Lobby
Dining Room	Cafes
Hallway	Theater Foyers
Den or Library	Court Houses
Music Room	School Rooms
Retail Shops and Stores	Lodge Halls
Bed Rooms	Bank Buildings
Tea Rooms	

Kinds of Surfaces to Decorate.—Glazing may be done over any surface that can be successfully painted to

give a solid ground of uniform color and density. Below is listed the surfaces commonly glazed:

Plaster Walls: Smooth hard finish, sand finish, rough textured, stucco.

Fabric Walls: Covered with canvas, muslin, burlap or oil cloth.

Wall Board: Smooth or rough textures.

Wall Paper: To tone down strong colors and patterns and to alter the color to harmonize with furnishings.

Materials Used.—Glazing, mottling and blending can be done with good quality tinting colors ground in oil, such as are put up in 1-lb. cans and which are clear and semi-transparent. Poor colors are muddy and lack tinting strength. Tabulated below is a list of colors needed:

Browns: Raw and Burnt Umber, Raw and Burnt Sienna, Vandyke Brown.

Reds: American Vermilion, Rose Pink, Rose Lake, Turkey Red Lake.

Yellow: Yellow Lake, Dutch Pink, Orange Chrome. Do not use Ochre.

Greens: Chrome, medium, light, dark; Verdigris.

Blue: Prussian, Ultramarine, Cobalt.

Black: Lamp and Ivory Black.

White: Zinc Oxide.

For very fine work decorators use colors that are of higher quality, being more transparent and ground finer in oil of lighter color, and from the highest grade of pigments. These colors are put up in tubes about $1\frac{1}{2} \times 5$ inches and cost more than ordinary tinting colors. A much greater variety of colors can be had in tubes, but the house tinting colors named above are satisfactory for some work.

Decorators' Glaze Colors.—For high class glazing, mottling, blending, Tiffany and other special wall finishes, colors are needed which are not alone brilliant

Plate 11.—Tools Used for Tiffany Glazing, Mottling and Blending.

and clear, but also more transparent. These are called glaze colors. The following list of such colors is quite complete. They are ground in oil and put up in tubes and one-pound cans.

YELLOW

Brown Pink
Gamboge
Italian Pink
Indian Yellow
Orange Lake
Yellow Lake, Light
Yellow Lake, Deep
Royal Golden Lake
Raw Sienna

GREEN

Alizarine Green, Light
Alizarine Green, Deep
Blue-Green
Emerald Green
Green Lake, Permanent
Malachite Green
Sap Green
Vert Emeraude
Verdigris

BLUE

Cobalt Blue
Chinese Blue
Italian Blue
Steel Blue
Verditer Blue
Ultramarine Blue

RED

Alizarine Crimson
Alizarine Lake
Carmine No. 40
Florentine Lake
French Nakaret Carmine
Geranium Lake, Bluish
Geranium Lake, Yellowish
Permanent Crimson Lake
Permanent Turkey Red
Permanent Vermilion, Light
Permanent Vermilion, Deep
Rose Madder
Scarlet Lake
Vienna Rose Lake
Asphaltum

PURPLE

Deep Purple, extra
Royal Purple
Heliotrope
Magenta

Other Materials Used Are.—Linseed oil, raw or boiled; turpentine, benzine, cornstarch, Japan drier.

Tools Used.—The brushes needed as shown on Plate 11:

1 Flat Wall Brush, 4-inch
1 Sash Brush, flat, 2-inch, for each glazing color
1 Stippling Brush
1 Large Sponge
Cheese Cloth, several yards
Newspapers
Burlap
Rope Ends
Clean Pots
Wiping Rags
Mixing Paddles, one for each color

Preparation of the Surface.—Before any decorative work of this character is started the walls must be thoroughly dry. The surface should be prepared as per Chapter IV.

Ground Coats.—For high class decorations the surface and ground coats must be perfect. The surface must be dry and free from suction spots.

Two coats of paint which dry flat are usually required to secure a uniform surface, and a coat of glue size, varnish size or a prepared size between coats of paint is worth all it costs. These coats should be put on as per directions in Chapters III, V and VI. The last coat of paint on smooth wall surfaces should be stippled.

The ground coats should dry thoroughly before any glazing is done.

Where small areas such as panels in dining rooms, theaters and cafes are to be glazed and an especially clear and bright metallic appearance is wanted make your second flat ground coat by thinning aluminum, gold, copper or other color of bronze powder with varnish cut with benzine to the consistency of linseed. Ordinary bronzing liquid is also suitable for mixing with the bronze powder.

When the bronze coat is dry coat it over with a thin

coat of bleached or white shellac to keep the bronze from rubbing up.

From this point on the glazing process is the same as for painted grounds.

Stencil or Pounce Outline.—When the ground coat is dry the outline for any stencil design or freehand decorations should be put on. Any color may be used for this but raw umber thinned with turpentine and a little linseed oil is usually used for stencil outlines.

Distemper or water graining color—raw umber—is best when rapid drying is essential to permit following up immediately with the glaze colors.

It is customary among some decorators to put on the outline for conventional and classic designs after the glaze coat is on and dry, using paper pounce patterns for tracing the outlines.

Glazing Liquids.—To permit the colors to be spread over the surface and nicely blended, stippled or mottled without striking into and drying on the surface too quickly, a glazing liquid is used. It is a clear transparent liquid which will dry without gloss and dry soon enough to prevent the colors from running.

There are various ways to mix glazing liquids. One formula reads:

⅓ boiled linseed oil
⅔ turpentine

Another formula commonly used is:

1 part boiled linseed oil
1 part benzine
2 parts turpentine

One of the flatting oils made for mixing with white lead makes a good glazing liquid and some manufacturers make a liquid especially for glazing.

When the glazing is to be done on hard, smooth fin-

ished walls about one pound of cornstarch should be mixed in with each gallon of glazing liquid. This will prevent the color and liquid from running. A little very fine dry whiting is sometimes used for this purpose. The cornstarch is best and is especially needed when old fatty color is used. It is not needed for glazing on rough surfaces.

The glazing liquid must be tempered in the mixing exactly to fit the temperature and ventilation of the room. The more ventilation the faster the glazing liquid will dry. In hot, well ventilated rooms use raw instead of boiled linseed oil and no Japan drier. The amount of oil in the liquid may also be increased, but not enough to cause it to dry with a gloss. An electric fan in the room speeds the drying greatly. When the surface has a gloss less oil and more turpentine is needed in the glazing liquid.

To Mix Glazing Colors.—A clean pot should be used for each of the glazing colors. Then the paste color should be thinned a very little with some of the glazing liquid. Thin it only enough to permit straining through fly screen or other strainer into the clean pot. If the wall to be glazed has a gloss finish thin the glazing colors with turpentine only and also use less oil in the glazing liquid.

Simple Two-Color Glazing.—The ground color of paint or bronze described heretofore is one of the colors. It often is ivory white, cream, light gray or pure white. The darker the ground coat the darker the whole color scheme will be. For pure yellow glazes a white ground is needed; likewise white is best for a very light blue glaze finish.

The second color is a transparent glaze or stain to be put on after the ground color is dry. To illustrate: suppose the ground color is ivory white, flat and opaque, giving a uniformly covered, stippled surface. Suppose the finished color wanted is a Spanish leather brown.

The glaze color, then, would be Vandyke brown, or Vandyke brown and burnt umber mixed.

Before applying the second or glazing color, coat a section of the wall about 6 feet wide and from picture mould to base-board with clear glazing liquid without color, using a four-inch wall brush or calcimine brush to spread it out thin. Do not coat too large a surface, as it may set too rapidly to permit of nice blending. Glaze a small surface at a time to begin with and do not cut a straight edge where you leave off in the center of a large panel or space, but rather leave an irregular edge which can more easily be matched up with the next section of color.

Plan your work to complete one whole panel from door casing to window or from casing to corner before you let the glaze dry. Take advantage of the construction of the room in laying out your work so that you will have a stopping place that can readily be matched up when you begin again next day. It is sometimes advisable to have two or three men blending on a large stretch.

When the first stretch has been coated in with glazing liquid, and immediately *while the liquid is wet,* dip a clean brush into the pot of Vandyke brown which had previously been mixed to a semi-paste form. Pick up a very little of the color on the tip of the brush and brush it on to the surface in small patches here and there. Do this in what the artists call a carefully careless manner. Use the brush in a circular or spiral manner and do not use straight, regular brush strokes as in ordinary painting. Do not cover the whole surface,—just spot it here and there as shown by Plate 12.

Having the clouded, spotty surface with the ground coat showing through between spots, you are now ready to begin blending.

Take a large wad of cheese cloth about as big as a large sponge and begin on the upper left hand corner

of the stretch to stipple or pat the surface with the wad of cloth crumpled up in your hand as shown by Plate 12. If too small a piece of cloth is used for stippling a spotty effect will be gained to the detriment of the beauty of the treatment.

Pat the entire panel lightly and deftly until you have arrived at a blended and clouded effect that looks quite like white clouds against a blue sky. Some prefer the clouding to be very strong and pronounced, while others want a restrained effect with the pattern not at all prominent. It is difficult to judge the effect of your blending except from the opposite side of the room. From there you can readily see where the panel needs a little more wiping out or a little more stippling with color to get a uniform blend. The more the glaze color coat is wiped with the cloth the more the ground coat will show through and the lighter the wall will be because the cloth picks up the color. The remarks about brushing in a circular manner rather than in a straight line applies equally well to wiping out with a cloth. Every stroke with the hand should be in a circular fashion and the *wrist should be twisted* while the cloth is on the surface. Correct blending with the cheese cloth by twisting the wrist is the key to the entire glazing process. See Plate 14. If the decorator will learn properly to blend with a cloth and will step away from the wall often to observe the effect his success is assured.

After a satisfactory blend has been assured it may be allowed to dry as finished. Or if desired you may stipple the glaze coat with a stippling brush to give a more uniform effect. Clean up the woodwork, then, and allow the glaze to dry.

Fill In and Wipe Out Stencil.—Before leaving the glaze coat to dry take a piece of clean wiping rag and wipe off all glaze color from between the stencil outlines so the ground color will show through.

Plate 12.—Spots of First Color and the Beginning of a Cheese-Cloth Stipple for Tiffany Glazing, Mottling and Blending.

Plate 13.—Glazing Color Blended Out with a Stippling Brush.

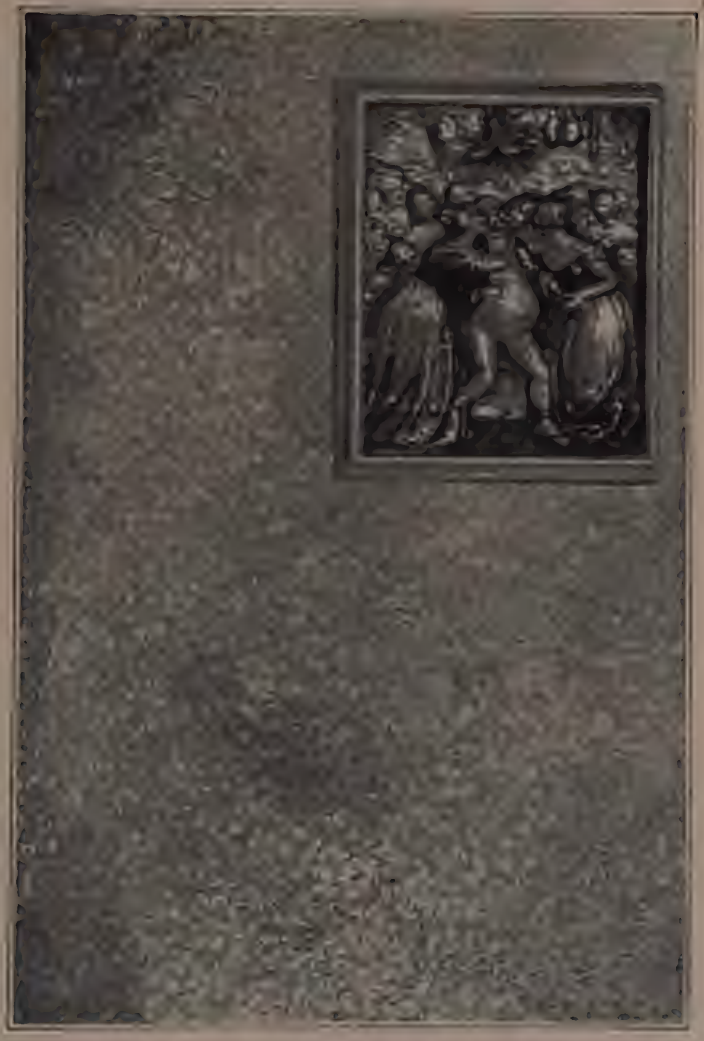


Plate 13A.—Glazing Color Stippled with a Sea-Wool Sponge.

Plate 13B.—Glazing Color Stipoled with a Wad of Newspaper.

Plate 13C.—Glazing Color Stippled with a Wad of Burlap.

Plate 13D.—Glazing Color Stippled with a Rubber Sponge.

Plate 13E.—Glazing Color Stipoled with Cheese-Cloth.

The stencil colors may next be filled in and wiped out for high lights and shading.

When the Glaze Color Runs.—If the room is damp and cold and lacks ventilation the glaze color may run.

If raw linseed oil has been used without any Japan drier in the glazing liquid the color may run.

If you mix the glazing color too thin or brush too much glazing liquid onto the surface the color will run.

The remedies for running glaze color is to increase ventilation by opening windows and doors or by turning on an electric fan and then keep on blending and stippling with the wad of cheese cloth until the color remains where you want it.

When runs are numerous it may be wiser simply to wash off the entire glaze coat with benzine and take a new start.

When your ground coat is paint with too much gloss and when it is oil cloth, wipe over the entire surface with a cloth wet with benzine before putting on any glazing liquid.

The addition of one pound of corn starch to a gallon of glazing liquid prevents running of color.

Glaze color may run when considerable color is put on to make a very dark effect. The remedy is to use very little or no glazing liquid on the wall,—only the color paste put on and blended out.

Glaze Sets Before Blending.—If the work sets too quickly you have used boiled oil where raw is required or too much turpentine or drier, or the room is small and too well ventilated, or you coated in too large a stretch with glazing liquid. A stretch six feet wide from the top of a wall to the baseboard is large enough for each stretch, and sometimes a smaller stretch should be carried down. A smooth wall requires more drier than a rough one. You must learn to manipulate your thinners according to the size of the room, the tempera-

ture and the amount of ventilation. The glaze can be made to set as rapidly or as slowly as desired.

Finishing the Job.—Decorations of this type are often good for several years. To keep the walls clean a very thin coat of light colored interior varnish thinned with turpentine is brushed on. Then the walls may be washed often. A starch coat put on as described in Chapter VI is more often used for this purpose.

Multicolor Glazing.—A more colorful and pleasing wall treatment results from using one predominating color and two or three subordinate colors.

To produce this finish proceed with the job in exactly the same manner as described for simple two-color glazing.

When you have placed the spiral daubs of the first and predominating color on the wall and before blending them out with the wad of cheese cloth add two or three other colors. Only a few spots of the other colors should appear, however. Place them irregularly, carelessly here and there.

To carry the illustration given further—that of a simple two-color Spanish leather effect—suppose instead an autumn effect is wanted. The Vandyke brown or burnt umber would be the predominating color. Then a few spots of red, rose lake or American vermilion perhaps, and a few spots of verdigris green, Prussian blue and raw sienna might be added in moderation. All would then be blended together.

Each of the glaze colors ought to be mixed in a separate pot and a seperate clean brush (a two-inch sash tool) should be used to apply each color.

Brush on these daubs in a spiral fashion from the center outward until the spot is about six or eight inches in diameter like Plate 15. The size of these spots and the number of them vary according to the size of the wall, making large spots for large rooms and small ones for small panels or rooms. The spots should not be

Plate 14.—The Wrist Movement for Producing a Circular Texture When Glazing, Mottling and Blending.

placed regularly in rows or columns but generally rather than exactly diagonal, nor should all spots in a panel be of the same size. Place them here and there as fancy dictates. It is better to have too few than too many spots.

The stippling brush, or clean calcimine brush, can now be used to blend all of the various clouds of color into the first glazing color and then the entire panel should be stippled or patted lightly with a wad of cheese cloth. Patches of color that are too strong may be wiped or blended out with the cloth until they are just strong enough.

Do not rub or work too long in any one place or you may mix the colors together and thus produce a drab or neutral color; what you really want to do is to spread one color over the other and thus secure a transparent, irridescent effect. You want a clouded, graduated effect with all colors blending into each other, and yet the pure color in the center of each spot must be in evidence. When the blend has finally been nicely done, stipple the entire surface with a stippling brush or not as you prefer and allow it to dry. The wall will then look like Plate 16.

The most difficult part of this work is in knowing when to quit. Go away from the wall occasionally to rest your eyes and you will be better able to use good judgment. View the effect often from the center of the room. Subdue the colors too much rather than to take a chance on their being too bright and prominent. Colors too bright get tiresome soon while restrained, subtle effects are appreciated more the longer one views them.

Graduated Blends.—If you want to glaze a wall to have a dark color at the bottom blending up to a very light ceiling color at the top of the wall the procedure is the same as for simple two-color glazing except that when putting on the first glaze color you use stripes

running horizontally as pictured in Plate 17. The stripes should contain quite a little color at the bottom and should be close together. As you go up the wall make the stripes a little lighter in the amount of color by easing off the pressure on the brush and space them a little farther apart. Place the last stripe fully two feet from the ceiling or picture mould. Beginning at the top blend your stripes together with a stippling brush and make your blend graduate as perfectly as possible from the floor to the ceiling or picture mould. Enough color will be carried on the stippling brush or cloth to color the upper wall.

If in error the color is run too near the top wipe it out with a clean piece of cloth. When the wall color is too light anywhere wipe it over again with the cloth used in blending the dark bottom section. It will contain enough color to darken the light places, or add a few light strokes of the brush containing color.

Generally in producing a graduated blend that is to be very dark at the bottom it is better to add a few stripes of a different and darker color than to gain the dark shading by using a large amount of the color used on the center and upper wall spaces. Too much of any one color is quite sure to run and cause trouble after blending. No glazing liquid should be used on the bottom dark area of the wall.

If more colors are to be used in the scheme wipe out spots here and there and fill in with these colors. The spots of color, like the stripes, should be fewer and farther apart as you near the top of the wall so as not to darken the effect too much to secure a proper graduation of color.

The colors are all to be blended with the cheese cloth wad; then stipple the whole surface if needed with a regular stippling brush and let dry. The surface when finished will look like Plate 18.

Glazing Very Rough Walls.—The process is the same

Plate 13.—Spots of Several Colors as Put on to Begin a Multi-Color Blend

Plate 16.—The Multi-Color Blend Finished.

Plate 17.—Horizontal Stripes of Glazing Color as Put on for a Graduated Blend.

Plate 18.—The Graduated Blend Finished.

for such walls as for smooth surfaces with these exceptions.

Before the ground coats go on to a new wall the surface should be coated with a soap and linseed oil size as described in Chapter V.

Then the first glazing color should be brushed on to the wall with a four-inch flat wall brush or a calcimine brush after the glazing liquid has been brushed on. The other glaze colors may then be put on in circular daubs as before.

Flat and Gloss Spots.—When there are suction spots in the surface the glaze coat may dry with flat spots. These may be rubbed over lightly when dry with a little glazing liquid. Hot alkaline spots in the new plaster wall also cause flat spots to appear.

Sometimes gloss spots—"shiners"—will appear, caused by too much brushing of flat ground coats. Excessive brushing of flat paint brings the oil to the surface and makes a gloss spot.

Gloss spots may be rubbed over with cold water when dry and sometimes they will flat. Sometimes a little benzine rub will flat the spots. And again it may be necessary to dissolve a little paraffin wax in turpentine and rub that on to the gloss spots. Very little wax or paraffin oil should be used, however. It is difficult to paint over in the future.

Starch coating walls usually eliminates all gloss and flat spots.

Glazing in Gray Tones.—Since glazing, mottling and blending are usually done with transparent colors, eliminating black, white lead, ochre, chrome yellow, orange chrome, etc., a decorator is often puzzled to know how to produce gray glazed and stippled effects.

Beautiful gray stippled and mottled effects are done this way. The ground coats are either white or light gray. The stippling and mottling colors are raw umber, cobalt blue and a little lamp or ivory black. When

white is needed zinc oxide is best. The work is handled exactly in the same manner as other glazing, mottling and blending.

Glazing Other Surfaces.—Glazed, mottled and blended effects are usually done over plaster walls which have been covered with canvas, burlap or muslin. In this event the wall fabric must be filled and painted as per Chapter XVIII.

When glazing is done on oil cloth and other special wall fabrics which are sized, filled and painted the glazed finishes may be put on without further ground coats, provided the fabric is a suitable color and has no damaged patches.

Wall paper is sometimes given a glaze color treatment to subdue strong pattern or color or to make it harmonize with furnishings.

The process is somewhat the same for wall paper as for other surfaces except that no ground coats are needed and no oil can be used. The glazing color, which is water or distemper color thinned with water, is mixed very thin and put directly on to the paper with a stippling brush. The brush is not dipped into the color, however. The color is first brushed on to a piece of tin or a flat board. Then the stippling brush or a large sponge will pick up enough color from the board by pounding the board with it.

Other Tools for Stippling.—The descriptions of the glazing, blending and mottling process so far have mentioned only a wad of cheese cloth and a regular wall stippling brush for use in distributing the colors. This was done to simplify the instruction.

As a matter of fact, several materials are used as tools for stippling the glaze color and each tool gives a different pattern.

Some of the other materials used as tools with which to stipple are: Burlap, canvas, natural sponges, rubber sponges, the frayed end of a large rope, newspaper

crumpled up and also the flat side of a calcimine brush.

Varied effects are produced by using a tool on the first glaze coat which will give a coarse, strong pattern like that made with a wad of newspaper and on the second glaze color a different tool is used—perhaps a wad of cheese cloth or a stippling brush. In this method the first glaze coat is stippled and permitted to dry before the succeeding glaze colors are put on and stippled. It is not necessary to allow the first coat to dry, but if the second color is spread and stippled while the first is wet some of the pattern of the first stipple will be subdued or lost by the second stipple tool.

An ordinary grainer's comb may be used to give an interesting verticle lined effect. After the glaze coat has been spread and uniformly stippled with a wad of cheese cloth, or the stippling brush, take the comb and, beginning at the top of the wall, drag it down through the wet glaze color, at the same time moving the comb from side to side to produce a wave line effect.

Glaze Color Scheme Suggestions.—At first it is better for a new hand to do only simple glazing, using one color over a different tinted ground coat. The umbers, siennas, blues and greens over ivory, white or light gray ground will give a wide variety of combinations. Any glazing color may, of course, be used over any color of ground coats.

For graduated schemes here are a few easy ones to go over ivory white ground:

Bottom	*Top*
Raw Umber	Raw Sienna
Chrome Green, dark	Prussian Blue
Van Dyke Brown	Raw Sienna
Burnt Sienna	Orange Chrome
Burnt Umber	Raw Sienna

There are those who prefer an even, delicately clouded effect in glazing, while others want pronounced

clouds of color to show quite strongly. Some rooms, a den or smoking room perhaps, and large rooms, permit of fairly strong, pronounced coloring, but a dining room, living room or bedroom calls for finer patterns and a subdued blending of the colors, as a rule.

Be reserved and modest about coloring. Nothing looks more primitive, vulgar and ordinary than a wall glazed in large patches of strong color that resemble a map of the Balkan peninsula. Your own technical skill and artistic sense of fitness are your greatest assets in glazing as in all decorative work. That strange sense of propriety that knows when it is enough—that superb intuition that restrains one from doing what is ridiculous and strange are the only guides to follow. Be simple and conservative in the use of colors; when you are conscious of power, restrain it—keep it in reserve. A simple, straightforward treatment is usually the sign of a master workman. Achievement of simplicity is the great and difficult art.

The background color should be determined largely by the exposure of the room. If the room is northern exposure or inclined to be dark through shaded foliage or veranda, a light, warm color should be the background selection.

Warm creams, pale yellows, or even rich golden yellows offer excellent selections.

If the room has a southern exposure and the light unshaded or glaring, a cool color is preferable for the walls. Soft grays, light grayed-green, or grayed bluish-greens provide excellent backgrounds for rooms of this character.

After the background color has been selected, the next problem is to determine the harmonizing colors for the stippling or mottling—the glazing colors. There are several courses which the painter can follow. He can select several tones of one color, or two tones of

one color and one contrasting color or three contrasting colors.

If three tones of one color are selected, each tone should be slightly grayer and darker than the ground color. If one contrasting tone is selected, it should be the color which is the keynote color of the furnishing scheme of the room.

If the color scheme of the room has already been selected, and is harmonious, this contrasting color is supplied to the painter. He has only to use his own experience and discrimination in applying it to the stippling scheme in the proper tone and value.

In new houses, however, the decorations of the walls are decided upon before the furnishings of the rooms are purchased sometimes. This enables the painter to advise as to their handling, and to provide an additional service—if he is a real decorator—in suggesting colorings which would make the most harmonious ensemble with the walls.

The strength or depth of color used on walls must be gauged to fit the architectural character of the room as well as the purpose for which the room is used.

Glaze finishes in bed rooms, in flower and millinery shops, for example, ought to be light, delicate and colorful. White and very light colored ground colors are thus needed. And the glaze colors, too, should be light. This is accomplished by spreading them thin.

On the other hand, deep and moderately dark color treatment is essential for rooms furnished in the heavy Old English or Jacobean period style, and especially where heavy dark wood paneling covers the walls or where the wood trim is massive and covers a considerable area of the room. In such rooms the wall surface is much less than in the average room and then the walls naturally require heavier coloring to balance well with the rest of the room.

To illustrate such color schemes further, consider a room paneled in oak finished in one of the brown stained effects—fumed, mission, antique or Jacobean. A mottled and blended finished effect in neutral orange or old blue is appropriate. For the neutral orange finish make the ground coat buff or Colonial yellow. The glaze colors should then be burnt umber and raw sienna.

For the old blue finish make the ground color medium light from white flat paint tinted with Prussian blue and a very little black. The glaze coat over the blue may be raw umber.

Another way to produce an interesting old blue finish is to use a medium light bluish-gray ground color. Put on next a glaze of Prussian blue stippled with crumpled newspaper and let it dry. Next glaze over with raw or burnt umber stippled with cheese cloth. A three-toned color treatment is thus produced.

Glazing to Match Aged Effects.—The decorator is sometimes called upon to reproduce on new walls, panels and furniture the mellow, aged appearance of old architecture. That sorely tests the skill of a decorator, but it is fascinating and can be done with a little ingenuity and a full knowledge of materials, tools and methods.

By way of illustration, an architect specified the finish of a new wainscoated room to match the mellow coloring of an old piece of Louis XVI paneling.

The new panels were white wood veneer. The decorator first primed with white lead and then sandpapered the surface when dry. Next, four coats of paint were tinted a soft grayish blue-green using chrome green, golden ochre, cobalt blue and raw umber. Each coat was sanded to make a smooth job.

Next the mouldings and carved ornaments were coated with gold size and covered with French gold leaf which was burnished only a little on the high spots.

The glaze coat was next brushed on to give an an-

tique finish. It was spread over the entire surface, mouldings, ornaments and all. The glaze colors were Vandyke brown, cobalt blue and yellow lake. The stippling was done with cheese cloth and a stippling brush while all glaze colors were wet at the same time. Highlights were made by wiping off the glaze colors here and there in the centers of the panels and stiles as well as off such places as might naturally have been worn off in usage.

Antique Italian Finish.—A rough sand finished or other rough textured wall may be given a very interesting finish in this simple manner.

A white plaster floated rough wall, or a sand-float painted wall, is first given a thin coat of bleached shellac. When the shellac is dry a coat of paint of warm gray color and mixed to dry flat or semi-flat is to be brushed on to the wall in the ordinary way.

While the paint is still wet wipe over the surface with a clean rag. This will remove the paint from the high spots of the wall only. The low places will remain painted, and contrast with the high spots which show through in the white plaster color. The wiping should be done in a carefully careless way to avoid any uniform, mechanical pattern. A two-toned interesting effect of lights and shadows is thus produced similar to the treatment given antique plaster cast statuary.

Some decorators finish such a wall treatment with floor-wax polished by hand.

A Mottled Novelty Finish.—For use in panels, or for a sun parlor wall treatment, a very interesting mottled finish may be produced as follows. It is also useful for window displays, theater decorations and wherever novelty color treatment is wanted.

The wall surface is first painted in the usual manner with at least two coats to dry flat.

Any color combinations may be used but for the pur-

pose of illustrating the method let us say the general color effect wanted is light, warm gray. The ground coats, then, are light gray.

For the finishing coat mix a pot of white paint to dry semi-flat and add to it about one ounce of American vermilion which has been thinned to brushing consistency with turpentine. Just dump the red into the gray and *do not* mix it into the gray paint. About two turns around the pot with the mixing paddle is enough mixing to do.

Next add about an ounce of medium chrome yellow and handle in the same way.

Finally, add about one-quarter ounce of Prussian blue in the same manner.

The pot of white paint should be made a little thin to cover well by mixing in turpentine *before* the colors are added.

A pot of veri-colored paint of this type can now be brushed on to the wall in a thin glaze. Do as little brushing as possible to cover the surface and follow immediately with a stippling brush.

By a little experimenting you will soon learn to produce a mottled surface which has a general grey effect but which shows slight touches of each of the red, yellow and blue.

Silk Glazed Effects.—Various methods have been used to gain a glossy silk wall finish for wall panels and sometimes for fairly large wall areas.

In this treatment the first ground coat is mixed to dry with a semi-gloss. The second ground coat is mixed to dry with a full gloss, adding a little enamel for increasing the gloss. The glaze color is mixed with more oil and less turpentine, to increase the gloss. Use cornstarch in the glaze liquid—one pound of starch to the gallon to keep it from running. A little interior varnish will help increase the gloss of the glazing liquid and make a better job.

When the glaze coat has been stippled and blended nicely with cheese cloth let it dry.

The finishing coat is a flat, opaque paint of light color to contrast well with the dark blended and mottled ground color. This last coat is used only for trans-

Plate 19.—The Type of Diaper Stencil Used for an All-Over Design.

ferring a stencil design to cover the whole surface—what is called an all-over pattern, a diaper stencil which prints a floral, geometric or classic design similar to some wall paper patterns. See Plate 19.

The silk effect is gained by light reflections upon the gloss surface of the ground coat.

CHAPTER XI

SAND-FLOAT WALL FINISH

For two reasons this new finish lays claim to decorators' interest. In the first place it is the most simple, quickest and cheapest way to treat smooth or rough plaster walls which have become considerably damaged with cracks and holes.

And in the second place rough textured walls, such as are produced with sand-float, are far more artistic than smooth walls as a decorative background for the furnishings of a room. Furthermore, the masses of the great middle classes of people have come to appreciate the greater beauty of rough textured walls.

To describe the sand-float process in a few words, it may be called simply a wall paint with sand in it.

Where to Use This Finish.—Sand-float finish may be used on any surface which can be painted. It may be put on in one coat for fine textured finishes or in two or three coats for very rough textures. It is so successful in hiding imperfect surfaces that even the mortar joints in brick surfaces can be completely covered up.

Sand-float finish is commonly put on over canvas covered walls and then makes an exceptionally tough and serviceable decorative coating. In this finish, in fact, is produced a coating which will withstand the hard knocks of furniture and general treatment better than

rough plaster or any other coating, except portland cement surfaces.

The appearance of sand-float finish is identical with that of rough plaster finishes and the pattern or texture can be varied to suit. Plates 20 and 21 give a fair idea of the rough texture of one kind of sand-float.

Sand-float finish with paint was originated by decorators who were called upon to finish old smooth finish plaster walls to match new rough sand finished walls.

Many of the characteristics of mottled, blended and glazed walls are possessed by rough textured surfaces like sand-float. The light and dark color effects, the mellow appearance and interesting variations of light and shadow all go to make rough textures more beautiful and consequently more artistic than plain, smooth, colored walls. And rough walls when they have accumulated more or less dust and smoke often look better than when new.

In addition to the use on interior walls of all kinds, sand-float may also be used on temporary outside surfaces, park buildings, county fair structures, etc. Many years ago sand-float finishes were popular for use on exterior metal roof cornices and it was used on brick and stone surfaces as well as on wood. There is some reason, however, to doubt the wisdom of using it on any exterior surfaces, except temporary buildings to stand only a few months. Weather and temperature extremes may cause cracking and scaling. But on interior surfaces no such defect is likely to occur when the finish is carefully applied.

THE WORKING METHOD

The Ground Coat.—The first coat on new plaster, smooth or rough, should be one of first class paint mixed with about two-thirds linseed oil and one-third turpentine.

Old surfaces which have been painted before, and

Plate 26.—A Sand-Float Finished Wall.

upon which the old paint is firmly attached, should also have one coat of paint, but less oil and more turpentine are needed to make the paint dry with a semi-flat.

No glue or other size coat is needed on either new or old walls.

Cracks and holes ought, of course, to be filled and the surface generally prepared as per the directions

Plate 21.—A Close-Up View of the Sand-Float Texture.

given in Chapter IV. Canvas or other fabrics may be put on if desired as per Chapter XVIII.

Walls covered with calcimine should be washed free of all such material and if they were coated with glue oil size, it is especially necessary to apply a coat of white lead thinned with turpentine and tinted to suit.

Wallpaper on walls to be coated with sand-float should

be stripped off clean to remove all paper before the ground coat of paint is brushed on.

The ground coat of paint ought to be tinted the same color as the sand-float coat which follows next.

Mixing the Rough Coat.—The mixing of this coat is done in the ordinary manner and with materials in common use among painters. Here is the formula:

½ gal. outside gloss white prepared paint

or

½ gal. white lead paint thinned to stout brushing consistency with half boiled linseed oil and half turpentine

½ gal. inside prepared flat wall paint, or one quart of any good interior varnish or enamel to make the paint sticky.

Mix the white paint and the flat wall paint (or enamel or varnish) well and then add tinting colors to suit: Ivory white, cream color, light gray, yellow, blue or any color wanted.

Strain the paint after mixing.

Next secure a bucket full of torpedo sand or bank sand. Fine beach sand is not suitable. Work the sand through a piece of fly screen to eliminate the very fine sand. Then work what sand is left through a coarse screen. The sand which goes through the coarse screen is the material to use in the paint or, for a texture not so coarse, use the sand which sifted through the fly screen.

Mix into the paint enough of the sand to make a stiff mass. But the paint should not be too stiff to be daubed on to the surface with an old flat wall brush. It is important to mix this paint until every particle of sand is completely coated with paint.

To gain a very coarse, rugged texture it is best to use the finer sand which goes through a fly screen and put on two or three coats. Let each coat dry hard.

Plate 22.—Tools Used for Sand-Float Finishing.

Tools Used.—The tools needed for sand-float finishing are those pictured in Plate 22. The tools are an old flat wall brush, four or four and one-half inches wide. A brush with the bristles worn to half their original length is best because it is stiffer. A regular stippling brush is needed and an old one will serve better than a new one because it is stiffer. A stiff scrub brush is sometimes used in place of a stipple brush. A square mortar board, about eighteen inches square, made of light wood such as the plasterer uses is also needed to catch such paint as falls off the ceiling as it is being brushed on. Plenty of drop cloths are essential to this work, because it is impossible to prevent dropping some paint from the brush.

Brushing On the Paint.—The success you have in this work will be governed largely by two things—you must mix the sand and paint thoroughly, using enough but not too much sand, and you must make the paint sticky enough with flat wall paint, enamel or varnish. Nothing but mixing experience and experimenting will teach you this point. But some of the material will drop off your brush and off the wall and ceiling even when the work is correctly done.

Brush on the rough sand paint in the ordinary manner. When some drops off put on some more. And after coating in about one yard stipple the paint with the stippling brush. That will give a more uniform coating.

In your brushing work the brush around in a circular manner—not with straight brushing strokes. That gives an interesting texture.

When the paint drops off in parts and will not stick when put back, allow the surface to set a few minutes while you coat in some other stretch. The paint on the surface will then become more sticky and you can make additional material stick.

If the paint shows a tendency to lift off when stip-

pling allow it to set a few minutes. Also increase the ventilation.

The proper texture effect to produce for sand-float is that which results from regular rough sand finished plaster. A rough, irregular, mottled suface is wanted, one which is rougher in some places than others and one which shows plainly the circular tool marks in an irregular manner.

It is possible, however, to produce many different textures by using various tools. See Chapter XV for more on this subject.

Color Treatment.—This finish may be given no other color than that put into the rough coat of paint. The very roughness of the surface will cast shadows and highlights, making a two-toned effect.

The color treatment, however, is usually done by glazing over a light, rough-coat color with a darker glaze color or two, the same as for Tiffany glazing, mottling and blending, outlined in Chapter X. For instance, an interesting combination is an ivory or cream colored rough-coat with a burnt umber or Vandyke brown glaze coat to finish. A light gray rough-coat color with a glaze color of raw umber and Prussian blue gives a very interesting old blue effect.

Novelty and bizarre effects may easily be produced by using light or white rough-coat colors and clear brilliant reds, blues, greens, browns and yellows for glaze coats. Also bronze powders may be brushed on to the rough surface when dry. Then brilliant glaze colors may be used on top of the bronze for striking effects on window displays, tea room walls, theaters, etc.

Note Plate 23 for the general texture and appearance of a sand-float wall. This wall is in the living room of an average home in Chicago. It is an old smooth finish plaster surface which was covered with wall paper. The paper was stripped off. The ceiling sand-float texture is not so coarse as the side walls.

Plate 33.—The Sand-Float Job Showing Two Different Textures.

CHAPTER XII

SPONGE-STIPPLE WALL FINISHES

In this decorative process we have the means of producing some highly artistic effects. The method is exceedingly simple, requiring only ordinary care and good judgment as to fitting the strength of pattern and colors to the room being decorated.

Sponge-stipple finishes are versatile to a considerable degree. With them a skillful decorator readily produces effects in color and pattern which are restrained, delicate and sufficiently conventional to be used in almost any room. And yet, where strength of color and bold pattern are needed for very large surfaces viewed from a distance, where novelty and bizarre treatments are called for, sponge-stipple is also equal to the occasion.

Sponge-stipple decorations justly claim many practical advantages in addition to artistic merit. The cost of applying this finish is a little less if anything than plain painted walls because the stipple coat can be put on more rapidly than a coat of paint. With this wall finish old walls which show cracks and patches look far better than with plain colors in flat paint. Such defects are completely covered in some instances and when not covered they are difficult to find in a sponge-stipple finish.

The Decorative Effect Wanted.—As with most artistic finishes the effect aimed at is sort of a carefully careless

treatment. In other words you must avoid the regularity of machine-like repetitions of patterns. Producing just the right pattern is quite like the problem encountered by the landscape architect when planting trees. If he plants them in geometrical shapes an artificial and uninteresting effect results. If he tries to arrange them to look natural he doesn't always succeed. But if he takes several stones in hand and carelessly throws them out on the ground he quickly secures a natural grouping of the trees or shrubs when he plants them where the stones fall.

So it is with any decorative wall finish. Don't fuss with the pattern when it is natural in appearance. Knowing when to quit is most important. Plate 24 gives some idea of the pattern wanted, although it is greatly inadequate without the color values of the finish.

Suitable for Various Surfaces.—Sponge-stipple finishes can be used on any surface where paint and calcimine are used. They are commonly done in oil paint, flat paint and calcimine. They are equally suitable for smooth and rough plaster, wall board, canvas and burlap covered surfaces.

Whole wall areas may be given this finish, or it may be confined to panels.

For novelty effects it is also used on wood trim.

Materials Needed.—Beautiful finishes are commonly done with prepared flat wall paints, with white lead paints and with calcimine. This is true for the stipple coats and the ground coats.

Tools Required.—One large sponge selected for having one flat side with many rough edges, rather than a fairly smooth surface, is the first requirement. The sponge may be one of natural growth or it may be an artificial rubber sponge, which costs less money and works very well.

It is customary among some decorators to cut their sponges used for wall stipples with a knife to produce

Plate 24.—A Sponge-Stipple Finish Done with a Sea-Wool Sponge.

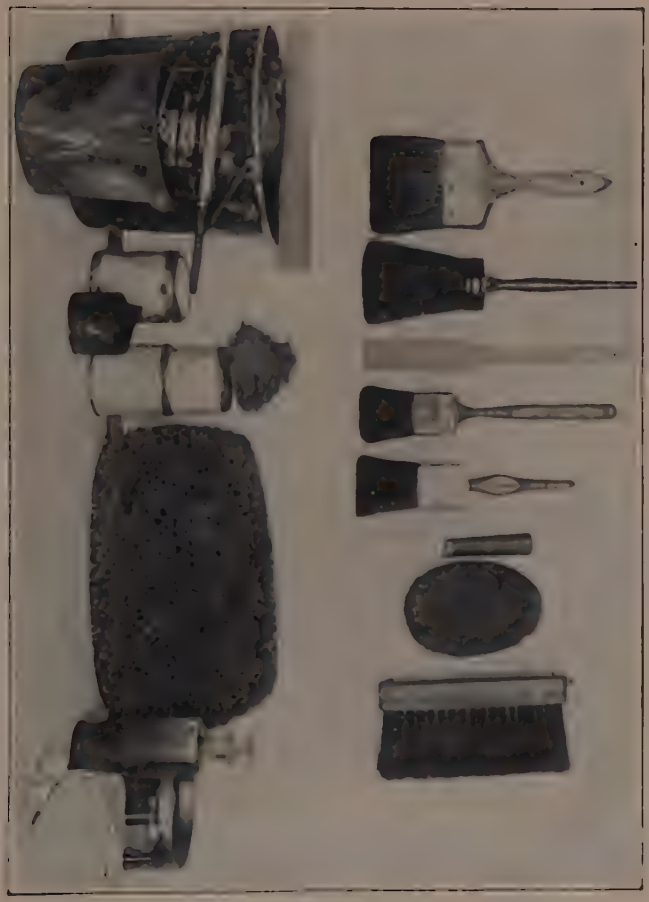


Plate 25.—The Tools Used for Making Sponge-Stipple Wall Finishes.

a flat side. This is done by first soaking the sponge in water then when hard dry any large sharp knife will cut through one portion of the sponge to make one flat side.

All types of sponges are used for this decorative work, but the deep sea wool sponge is better than the common grass sponge It has a good pattern for wall textures, is tough and more durable than others.

The rubber sponge makes a more interesting pattern than natural sponges.

The other tools needed are only the necessary pots for ground colors, stipple colors and one for benzine to wash out the sponge with occasionally. A four-inch wall brush, a mixing paddle and a stippling brush are also essential. See Plate 25.

Ground Coats for Paint Stipple.—New and old surfaces should be prepared as per directions written in Chapter IV.

Next, two ground coats of paint with a coat of size between are really needed for a high class job, although when the old surface is light in color it is sometimes possible to make a suitable ground for the stipple with only one ground coat. The ground coat is better when stippled with a brush. Chapters V and VI give all necessary information for the mixing and the application of these ground coats.

For luminous effects the ground coat may be gloss enamel or regular bronze paint in copper, aluminum, gold or other colors mixed with bronze liquid. The stipple coat should then be dead flat.

THE WORKING METHOD

The fundamental idea about sponge-stipple finishes is the application of a light colored, solid flat or gloss ground-color coat, then over that to spread a broken coat of a darker color in gloss or flat. If the ground coat is dark, the stipple coat must be light. The stipple

coat is put on with a sponge over top of the ground coat put on with a flat wall brush in the regular way.

The ground coat must be opaque to hide the surface and give a uniform color. The sponge-stipple coat may be opaque, or it may be a transparent glaze color.

If the ground coat is mixed to dry with a gloss, the stipple coat should be flat. And when the ground coat is flat the stipple coat may be either flat or gloss.

Sponge-stipple finish may be confined to a two-toned effect, using only the ground color and one stipple color, or several stipple colors in harmony may be used. Usually two stipple colors and the ground color are sufficient.

The Stipple Coat.—If prepared flat wall paint is used simply select the color wanted to harmonize with the ground color. Mix the paint thoroughly as per the manufacturer's directions and you are ready to begin.

If you are going to mix your paint from white lead, assuming that your ground color is flat or gloss and that you want a flat stipple finish, break up the lead and mix it with turpentine or flatting oil, as directed in Chapter VI. Add the tinting colors essential to producing the colored paint wanted to contrast and harmonize with the ground coat. Thin the paint to ordinary brushing consistency. If a very rough and darker finish is wanted mix the paint a little thicker. A fine pattern results from fairly thin paint, while a coarse pattern is produced by thicker paint.

Mix enough paint for the whole room at one time to avoid trouble in matching with a second batch.

As a rule the ground coat should be dry before putting on the stipple coat, but it is practical to add the stipple coat the same day after the ground coat has set an hour or two. Care must be taken, however, to avoid lifting the ground coat on the sponge and thus exposing the bare surface.

As suggested, the stipple coat is put on with a sponge, not a brush. Hold the sponge as in Plate 26.

Another tool called a Vari-Tone Sponge Roller, patented by a well-known paint manufacturer, is sometimes used for applying the stipple coat. It is used in the same manner as the hand sponge, except that the

Plate 26.—The Type of Sea-Wool Sponge Used for Wall Finishes.

coat is rolled on instead of stippled. Care must be taken when using this tool to avoid a monotonous repeated pattern and straight lines where one stretch joins another. This can be done easily. Also the finish can be touched up with a large sponge here and there to eliminate any repetitions or straight edges

which are too prominent. Plate 27 pictures this tool.

The sponge is soaked in benzine by some decorators before beginning to stipple, while others prefer to soak it in water. Whichever liquid is used, squeeze out all you can before putting any paint on the sponge. It is well to soak the sponge every five or ten minutes to fluff it up and remove accumulations of paint.

Plate 27.—The Vari-Tone Sponge Roller Used for Wall Finishes.

A new sponge gives a coarse rough pattern desirable for some work, but an old sponge is better for fine textured effects. The larger sharp projections on a new sponge may be trimmed off with shears if desirable.

The sponge must not be dipped into the paint. The paint is to be spread on to a flat piece of galvanized iron, board or newspaper with a flat wall brush in an

ordinary manner. Then the clean, damp sponge may be pressed down on the wet paint to pick up enough to cover the sponge tips.

Having loaded the flat side of the sponge, you are ready to begin the stipple coat. As in all wall decorating, begin on the upper left hand corner; work from top to bottom and from left to right. As a rule it is best to carry a stretch about six feet wide down from the picture mould to the base board. The right hand edge should not form a straight line, however. An irregular line is easier to join up with the next stretch.

Probably you cannot reach the areas close to the corners, mouldings, door and window casings with the large sponge. Have a small sponge or two handy to use for these places.

The sponge is to be used in the same way as a stippling brush; that is, the surface is pounded gently with it and at the same time moving the hand here and there in a circular manner rather than in a straight line. Press the sponge against the wall rather hard and pull straight away *without* twisting the hand as in Tiffany blending.

Return the sponge to the paint on the flat iron, board or newspaper as often as necessary to pick up the paint needed. Also, brush more paint from the pot on to the flat surface often but don't spread it too thick or the sponge will become overloaded and cease to stipple the right pattern.

After starting, try to keep the paint mixed the same consistency by frequent stirring, try to keep the flat surface evenly coated and try to keep the sponge evenly loaded. Wash the sponge out in benzine every few minutes. These precautions taken, uniform work will result.

In stippling, if you put too much paint on one spot by pressing too hard when the sponge has just been

loaded, leave the spot a minute or so and work the paint pretty well out of the brush on new surface. Then go back and pick up the excess paint from the smeared area. If necessary wash the sponge and wring it dry.

An interesting pattern cannot be secured by light stippling. Press the sponge hard, yet if too much color is on the sponge a smear will result. So, you see the wisdom of practising a bit on a wall board panel to learn just the right amount of color needed in the sponge and the pressure on the sponge.

If a bad job is made of it first, wash off all the stipple color with benzine and take a fresh start.

When stippling go over each area as few times as possible to cover it; that makes a nicer pattern than when the same spot is stippled repeatedly, making a smeared effect. Once over to transfer the paint and immediately once more to smooth out the joints and give the pattern sufficient stippling.

Learn when to quit stippling. That is where good taste centers. Judge the appearance of the work from across the room, not nearby. When one wall has been done, be sure to match the others to it, allowing for the darker walls in shadows. All should carry the same depth of color and amount of pattern.

When working on a very porous wall it is often best to coat the wall before any of the stipple coat has been put on with a glazing liquid composed of one part linseed oil, raw, two parts turpentine and one part benzine. That enables you to move the color on the surface more easily. Do not wait for the glazing liquid to dry.

The finish just described produced with the sponge is but one of many which result from using the same method in all respects except that a stippling brush, a wad of cheese cloth, crepe paper, muslin or burlap are substituted for the sponge. The stippling brush used like the sponge gives a finer textured surface.

The crepe paper, cheese cloth and burlap also produce fine, simple patterns but slightly different from each other. The heavy muslin when crumpled up into a wad gives an especially pleasing pattern resembling the figure of Spanish leather when done in the burnt umber or Vandyke brown over a ground coat of ivory. The materials or tools just mentioned are used in exactly the same manner as the sponge except that it is usually advisable to twist the hand with them when stippling the surface and it is not with the sponge.

HERE ARE A FEW PRETTY COLOR COMBINATIONS

Ground Coat	Stipple Coat	Materials	Stencil Color
White	Light Rose	American Vermilion and White Paint	Med. Light Gray
White	Light Gray	Lamp Black and White Paint	Dull Blue, Gray-Green or a Darker Gray
White	Light warm Yellow	Med. Chrome Yellow, a little Vermilion and White Paint	Light Cobalt Blue, neutral Light Drab
Light Gray	Same gray but a little darker	Lamp Black Raw Umber	Gray, Gray-Green or light Cobalt Blue
Light Gray	Light Blue	Cobalt Blue only	Gray, Blue or a Light Orange Yellow
Light Gray	Green	Med. Chrome Green only	Light Gray Neutral Drab
Ivory	Olive Green	Med. Chrome Green, French Ochre, White Paint	Ivory or Grayish Light Green
Light Colonial Yellow	Light Blue	Cobalt Blue White Paint	Neutral Gray, Ivory
Gold Bronze	Dark Green	Med. Chrome Green only	Light Warm Drab, Medium Olive, Warm Gray, Cream
Aluminum Bronze	Blue	Cobalt Blue only	Delft Blue, Light Ivory, Light Neutral Gray
Ivory	Tan	Raw Sienna only	Brown—Burnt Umber, Cream
Ivory	Dark Brown	Burnt Umber only	Light Tan, Cream Light Gray Drab

Color Schemes.—All combinations of opaque and transparent colors, as well as tints and shades made with these colors on a white paint, are used in the manner described. Not all colors used together will

harmonize as you well know, nor are all color combinations and stipple patterns suitable for every room. When two tones of the same color are used, harmony is certain.

CHAPTER XIII

SPATTER WALL FINISH

In this finish we have one which is quite old and yet it is a decorative treatment which is both practical and beautiful to an extent which assures its continued use.

As a rule spatter finish is used on bath room walls in residences and on other surfaces of small area like the centers of wall panels enclosed by mouldings, on the dado, filling or frieze of walls, etc. The finish is, however, perfectly suited for many other rooms, especially when a bit of novelty is wanted to break the monotony of many rooms decorated in strictly conventional, restrained style. A sun parlor, nursery, or child's room may be interestingly treated with this finish.

Plates 28 and 29 picture spatter finishes done with a spray gun.

Plate 29. This is an attractive spatter paint finish in black, white and blue, on a dull terra cotta ground color. It is much more attractive for some surfaces than it might appear from color names. Useful for lower walls and dados of halls and bath rooms. Any color combinations can be used, of course.

The materials used were ordinary paints mixed a little thicker than for brushing and to dry flat. Low pressure on the spray gun caused it to spatter and produce these delightful color effects.

Plate 28. Another spatter finish. A flat black ground color was sprayed on. Then ordinary aluminum bronze powder mixed with bronzing liquid was put into the material cup of the gun and with low pressure the spattering was quickly done.

This is a delightful texture and color combination for wall panels, for a Japanese or Chinese room wall treatment and for novelty decorations in many places.

Plates 30 and 31 illustrate this character of finish done by hand with a flat wall brush. The number of beautiful color combinations possible are limited only to the decorator's good taste and imagination.

To describe the finish briefly it may be said to consist of a solid, opaque, flat or gloss ground coat of paint, enamel or bronze. This ground coat may be light with little dark spatters of paint in two, three or more lighter colors on it, or the reverse may be used—dark ground color with light paint colors spattered on.

And in like manner the ground coat color may be mixed to dry with a high gloss and be spattered with colors which dry flat, or the reverse—flat ground with gloss spatter colors. Also a flat ground color may be spattered with flat finishing colors.

THE WORKING METHOD

Ground Coats.—Spatter finish may be put on to any kind of surface which can be painted. Both rough and smooth plaster, wall board and surfaces covered with canvas, burlap, oil cloth and wall paper may be decorated in this manner.

Preparatory work must be done for this finish on plaster walls the same as for plain painting. Chapter IV describes these methods.

Ground coats of paint are applied the same as for plain painting as per Chapter VI. On new walls two

Plate 28.—A Spatter Finish Produced with a Spray Gun. Aluminum Bronze on Top of a Flat Black Ground.

Plate IV.—A Spatter Finish With Several Colors Put on with a Spray Gun.

Plate 30.—A Spatter Finish in Four Colors Done by Hand with a Four-Inch Flat Wall Brush.

coats of paint with a coat of size between are essential for high class finishes.

Old walls in good condition may often be given a spatter finish after spreading on only one coat of ground color. It is essential, however, that a uniformly covered and colored surface be produced before putting on the spatter coats. This can be gained in one coat when the old paint color is not darker than the new ground color.

The second ground coat should be stippled in the usual way described in Chapter VI.

The ground coats may be any color, light, dark or bronze. To illustrate a specific job let us cite a bath room wall. The wood trim ceiling and side walls above the chair rail were pure white enamel. The wall below the rail was covered with oil cloth of a cream-white color without gloss.

The Spatter Coats.—On this job the oil cloth was slightly greasy to the touch, so it was wiped down with a cloth dampened in benzine. Next, one coat of flat paint of the same color,—just off the white toward cream, was brushed on and allowed to dry.

Over this ground color the first spatter coat was made from raw umber in oil thinned only with turpentine to brushing consistency so it would cover well when brushed in the ordinary manner.

This dull, drab color was spattered on to the wall in small specks as shown by Plate 31.

An old flat wall brush with bristles worn down to about half length was dipped into the umber paint only enough to cover half an inch or so of the bristles. The brush was slapped out on the inside of the pail to remove an excess of paint and then the paint was spattered onto the wall by striking the brush on a board where the bristles enter the ferrule. See Plate 32. The brush, in other words, was used like a hammer. The bristles never came in contact with the surface. An

ordinary scrub brush dipped in the color can also be used to spatter the color on. A table knife is scraped over top of the brush bristles. The brush is held flat in the left hand and up side down.

After a more or less uniform spattering of this first coat, the second spatter color may be put on without waiting for the first spatter color to dry. This second color on the job in question was made by mixing venetian red with turpentine to brushing consistency. The second spatter color was then put on the same as the first one.

A third spatter color was applied in the same manner. It was made by mixing white paint with enough Prussian blue to produce a deep sky blue tint, using turpentine only for thinning the pigments.

When this third spatter color was finished a beautiful and appropriate color combination with attractive pattern had been produced—ivory, grayish brown drab, dull red and sky blue.

As stated any color scheme may be so produced, being careful to place flat spatter coats on gloss or flat ground colors, but not gloss spatters on gloss ground.

When the ground color is made of gloss enamel and the spatter colors are flat a beautiful effect is gained at night. The gloss coat reflects the electric lights. The same is true when bronze ground colors are used.

COLOR SCHEME SUGGESTIONS

Ground Color	1st Spatter	2d Spatter	3d Spatter
White	Black	Yellow	
Silver Bronze	Blue-Green	Lemon-Yellow	Black
Silver Bronze	Black	Peacock Blue	Gray
Ivory	Dark Brown	Sage Green	White
Light Blue	Salmon	Black	Light Gray
Light Gray	Pink	Pea Green	Dark Gray
Buff	Violet	Yellow	Claret Red
Dull Grayed Green	Crimson	Ivory	Light Green
Medium Gray	Orange	Lavender	Brown
Copper Bronze	Chrome Green	Vermilion	Black
Gold Bronze	Crimson	Turquoise Blue	Black
White	Lilac	Scarlet	Black

Plate II.—The Same Spatter Finish as is Shown in Plate III. but with Only One Color on the Light-Colored Ground.

Plate 32.—The Method of Holding and Using the Brush with a Stick for Producing Spatter Finishes.

If a job is spoiled in places by spattering a few large gobs of paint on, these defects can be covered up by spattering on a little of the ground color over the defects.

CHAPTER XIV

VERNIS MARTIN AND METALLIC BRONZE FINISHES

For wall decorations these decorative treatments have a rather limited use, but for furniture and novelty finishes in general they are valuable.

Decorators doing Tiffany glazing sometimes prepare the ground color by spreading on a coat of silver, gold, copper or other bronze color and then putting on a glaze color or two over top and blending them out nicely. This makes a very rich effect, but it is rather too pretentious for any except the finest of residences where fine rugs, rich tapestries, drapes and period furniture are used to complete the setting appropriately.

The bronze undercoat serves very well, however, in well decorated public buildings like theatres, cafes, libraries, etc., and for wall panel centers on nearly any walls.

Bronze Powders Used.—These come in different grades. The more expensive and finer powders cost too much to use on large areas, although all cover and hide the surface well in one coat.

The less expensive decorators' bronze powders come in grades designated as pale or rich gold; fine pale or rich gold; extra fine pale or rich gold; superfine pale or rich gold.

Then there is a grade of bronze powders which are more brilliant and finer in texture described as: Roman

gold; Koh-i-Noor pale and rich gold; Hochglands pale gold; French gold leaf; karet gold leaf, XX deep; Vernis Martin.

Another grade, called colored metallics, is made for decorative artists, sign painters, window shades, wall paper, button and artificial flower manufacturers. The colors in this line are: Gold, copper, red, dark green, light blue, crimson, purple, orange.

There is a grade known as patent bronzes which includes such colors as: Lemon, fire, crimson, orange, blue.

For less expensive decorative work a grade called specialty bronze powders includes such items as: Radiator gold; statuary bronze; handmade lining and striping; aluminum A; chemically pure aluminum; aluminum striping; natural copper.

Bronzing Liquids.—For interior decorating purposes the purchase of a prepared liquid in gallon cans is usually most convenient and economical. These prepared liquids are usually made with amyl acetate (banana oil) which is mixed with dry bronze powders to make a paint; in fact, there are many lacquers made with a cellulose nitrate or acetate base. As a rule these are for use only indoors where protected from the weather and moisture.

Decorators often make a bronze liquid by adding a little turpentine or benzine to good interior varnish to thin it to just the right consistency, and when this is mixed with dry bronze powders a satisfactory metallic paint results.

For aluminum paints used on exterior metal surfaces, or any exterior surface, ordinary raw linseed oil is not suitable; it is too thin and permits the paint to run and streak. But, on the other hand, a special oil called heavy bodied boiled linseed oil is excellent for a moderate priced exterior metallic paint.

Spar varnish thinned to proper consistency with tur-

pentine or benzine makes a good bronze liquid for exterior surfaces and for all surfaces that are to be washed. A mixture of spar varnish and regular or heavy bodied boiled linseed oil makes a less expensive bronzing liquid for exterior paint which is very serviceable.

Compounds of China-wood oil (tung oil) and many other mixtures can be used for bronzing liquids. Care must be taken to make sure of proper drying properties in the liquid, however, since the leaf formation of a bronze pigment tends to retard drying.

A bronze liquid composed of linseed oil principally does not make a very hard film, and for that reason bronze paints which are to be subjected to abrasion, as on furniture, should be composed largely of good varnish.

To sum up, then, a bronze liquid must possess sufficient body to carry the metallic pigment and brush out into a smooth surface; it must contain enough drier to dry in a reasonable time; it must dry with a surface hard enough to resist abrasion when used for some purposes.

Mixing Bronze Paints.—The mixing of aluminum paint is accomplished in a reverse manner to that used for other paints, in the respect that the dry aluminum or colored bronze pigments are poured into a pot containing liquid. It is easier to mix any dry pigment with a liquid by placing the liquid in the pot first and stirring the dry pigment into it than if the reverse operation is followed.

The metallic pigments are very heavy and they settle to the bottom of the pot quickly. They should not only be thoroughly mixed, but it is essential to agitate the paint every few minutes by stirring in order to keep the paint of the same consistency all the time.

Aluminum paint should be mixed for average surfaces in the proportion of about 1½ to 2 pounds of dry alumi-

num powder to 1 gallon of heavy bodied boiled linseed oil. This will make approximately 1⅛ gallons of paint.

For some purposes the liquid used is entirely special heavy bodied boiled linseed oil. Ordinary raw linseed oil is too thin for use with this pigment. Some brands of heavy bodied boiled linseed oil can be thinned with turpentine or mineral spirits in the portion of 40 parts oil to 60 parts of turpentine and the resulting mixture will be of just about the right consistency for aluminum paint.

Where aluminum paint is exposed to the weather, spar varnish makes an excellent vehicle with which to mix the aluminum powder in the proportion of 1½ to 2 pounds of powder to a gallon of varnish. If the varnish vehicle is too expensive an excellent and serviceable liquid can still be made by using 20 per cent of ordinary pure raw or boiled linseed oil to 60 per cent of spar varnish.

The pigment particles of aluminum are flat and make up a paint film by a leafy formation, one flat pigment particle overlapping the other like fish scales. This leafing peculiarity retards the drying of linseed oil somewhat, and for that reason boiled oil is preferred. It is sometimes necessary to add a little Japan drier to make the paint dry rapidly enough. And if a harder paint film is wanted, spar varnish should be added to the oil vehicle.

Aluminum paint is very opaque and protects a surface well. It is particularly noted for excluding ultra-violet light rays. Such paint is valuable for protecting not only metal but also surfaces which are subjected to both indoor and outdoor exposure. Aluminum paint reflects most of the light and heat cast upon it and absorbs very little. It is for this reason that aluminum paint is used as a protective medium on balloon fabrics. In past years the large gas bags of airships deteriorated rapidly because of the the effect of the direct rays of sunlight. Aluminum paint has materially increased the

life of such fabrics by excluding the heat and light. China wood oil is used with aluminum powder for such paints because of its ability to withstand high temperatures.

Aluminum paint is excellent for such surfaces as large oil storage tanks, large gas holders of public service companies and many other metal surfaces. Bright aluminum reflects approximately 70 per cent of the light rays and about 90 per cent of heat rays.

A particular characteristic of aluminum paint to be kept in mind is that it is very opaque and its hiding power is such that often one coat of aluminum paint will obscure a surface which would require two or three coats of ordinary paint to gain the same end. A little aluminum paint spread onto a piece of glass and noted through the other side will give you a clear idea of this virtue. Such hiding power makes aluminum paint valuable for coating signboards which are to be relettered and also for use on mahogany finished doors stained with an aniline bleeding red. Sometimes mahogany finished doors when refinished with white enamel will turn pink even after many coats of enamel are applied. Then a coat of aluminum paint is usually successful in sealing up the bleeding stain.

For use on exterior surfaces at least two coats of aluminum paint are necessary.

Aluminum paint should be fresh each day, because it deteriorates by losing its rapid leafing quality when it stands in the vehicle for some time.

The polished aluminum powder has a higher reflectivity than an unpolished aluminum. The polished pigment reflects between 55 and 70 per cent of light rays, while the unpolished reflects between 45 and 50 per cent of light rays.

It is interesting to note that some very pleasing decorative effects can be gained by mixing tinting color pigments with aluminum paint. The aluminum will

conceal small amounts of color, but fairly large amounts will add their color to the paint, while the aluminum adds reflection and brilliance which are very pleasing.

One of the disadvantages of using bronze powders is that they tarnish and become quite dull in a few months. Only real gold and silver leaf will hold its brilliant metallic burnish for a long time. However, when bronze powders are covered over with varnish the tarnishing is much retarded.

Using Dry Bronzes.—On certain novelty wall finishes such as mottled, blended and glazed surfaces nice effects can be produced by a judicious use of dry bronze powder.

The method employed for this is simple. The glazed surface is finished in the usual manner as described in Chapter X. Then after the finish has taken the initial set, but before it is dry a bit of dry colored bronze powder is pounced or stippled on here and there. The bronze lodges in the sticky surface and gives a bright reflection in night lighting.

To put the bronze on the most common method is to place the dry bronze in a shallow dish. Take a wad of cotton or cheese cloth and dip it into the bronze. Then gently stipple the wall here and there with the bronze on the wad. Press the wad against the sticky glaze or paint coat hard enough to force the bronze into the paint.

Fine jobs of glazing are sometimes given a coat of thin, light colored varnish to protect them. The bronze powder may then be pounced into the varnish after it sets but before it becomes dry.

Vernis Martin Finish.—This name is used rathed indiscriminately to describe all manner of bronze and metallic finishes.

In the finishing of furniture the Vernis Martin finish is, perhaps, most commonly used. It is done by a simple and effective process.

A very tight box is built large enough to hold a chair, several picture or mirror frames or, in fact any piece of furniture to be so finished. In the top of this box the fan wheel of an electric fan is placed, the motor being on the outside of the box while the fan is inside.

The furniture to be finished is coated with a slow drying varnish, a special size made for this purpose of oil or Japan gold size. Then, while the coating is wet the furniture is placed in the cabinet, a generous quantity of dry bronze powder is dumped also into the box. The box is closed up tight and the fan is turned on. The strong air current from the fan blows the dry bronze against the wet varnish or size and the surface becomes uniformly coated.

The fan is stopped and after allowing time for the bronze to settle to avoid wasting it the furniture is removed and given ample time to dry.

When the bronze is dry it may be given one or more coats of clear varnish or lacquer to protect the bronze from abrasion and from tarnishing as it would from contact with the air.

Before the varnish or lacquer coats the bronze is often given a glaze coat of colors in oil or Japan nicely blended with a cheese cloth to give a mottled effect.

CHAPTER XV

HISTORIC AND NEW ROUGH WALL TEXTURES

FRENCH CAEN STONE
ROMAN TRAVERTINE
OLD ENGLISH PLASTER
ROMAN TILE FINISH
ITALIAN PLASTER
HOLLAND FINISH
SPANISH PALM FINISH
NOVEL FINISHES

Of the many beautiful rough textures in wall finishes being used today, perhaps the most artistic are not the newer patterns but those which have come down to us through the ages.

As originally done, such finishes were executed in mud, cement and lime plasters of varying compositions. Today they are done with materials which are more nearly related to paint than to the plaster known now.

Flat surfaces are improved by "texture," nearly all colors are improved by "texture" and deep, bright colors are improved by a slight gloss which gives depth of color.

In the hand textures we have wall treatments which have no suggestion of tiresome, mechanical repeat patterns. Variety and harmony of pattern are gained in the handmade textures without any concession of interest.

The ease with which hand textures can be given a bold or restrained handling makes this mode of decoration invaluable. Such wall treatments are mellowed by the passing of time and heightened in charm as is also true with all really beautiful *objets d'art.*

The hand-textured, rough wall finishes contribute beauty of considerable artistic merit to interior walls. Such surfaces are durable and washable; they are serviceable, indeed, withstanding all of the usual accidents common to walls in most homes from furniture bruises, the children's play and ordinary careless treatment generally.

As a rule one coat of plastic material brushed on, having been previously colored to suit, is ample; although two coats are needed for the very rough and rugged textures. The cost of one coat on rough textured surfaces amounts to less than two or three coats of plain painting.

The versatility and adaptability of the plastic paint materials now being used to produce rough textured finishes are characteristics which assure much greater use of artistic wall finishes from year to year. In the hands of decorators and artists of discriminating taste these plastic materials are capable of producing surprisingly numerous conventional and novelty textures.

Those of a creative nature find such plastic materials very responsive, while decorators more interested in producing wall finishes of tried and proven merit are able to select beautiful textures from the great variety available to fit every conceivable purpose in the decoration of walls.

Along with all of the potential beauty of which plastic paint materials are capable for rough wall textures, one cloud is visible on the horizon, so to speak. And that is the probability that some decorators are using rough textured finishes intemperately, inappropriately. There is a place for all finishes, but no one texture, pattern and color of finish is suitable for every room. The type of architecture, purpose for which the room is used and the furnishings are some of the elements to be considered in the selection of any one wall texture,

color and pattern. In Chapter II the subject of appropriateness is covered more in detail.

All forms of art and decoration in and out of the home are subject to such possibilities of intemperate and indiscriminate use, however. The development of an artistic sense of the eternal fitness of things is a lifelong study and is intimately dependent upon the whole education of the individual. Fortunately this study and the progress which results is fascinating; it builds up and sustains interest along with the hard work involved.

And when proficiency in the use of textures, patterns and colors appropriately has been gained by study, observation and experience one is no longer simply a painter, but an interior decorator within the full meaning of that descriptive term. There have always been too many craftsmen who have simply taken specifications from architect or customer for work to be accomplished without knowing why, wherefore or reason and who have methodically followed dictation step by step to the completion of a decorative work.

Then there are also too many interior decorators of the other extreme type,—those having considerable education, culture and refined taste who fuss with drapes, color schemes, accessories and expensive furniture, knowing little about working methods, materials and tools —the means which are essential to producing an adequate background for truly beautiful interiors, and the means essential for shaping raw materials to express artistic ideas on walls, ceilings, floors and architectural features of rooms.

On the one hand we have the mechanics who are exceedingly practical in technical essentials, the craftsmen painters who come from the bottom up knowing little about the aesthetic, cultural, historic art period elements involved in interior decoration; and on the other hand numerous men and women entering the pro-

fession of interior decoration from the top, so to speak, and who are greatly ignorant of the practical means of executing their artistic ideas.

But the future is promising because of the drawing together of these two extremes. The craftsmen are learning the aesthetic while those in the other group are pursuing knowledge of the practical means of transferring their dreams and imagination into paint and other decorative materials on wood, plaster, concrete and steel.

Decorative Wall Finishes in History.—What have now evolved into artistic and beautiful wall decorations in our day had their crude beginnings away back in the early ages when homes were but little more than mud huts. The thought uppermost in the minds of those people was for protection, not the beauty of decoration.

But as the struggle for the preservation of life became less difficult man gradually turned to thoughts of making his home better to look upon—an attempt at decoration. At first these thoughts found expression only by a more even application of the mud plaster and attempts to smooth it a bit with hands and sticks. Later the ideas of design, pattern and ornamentation developed. From such crude beginnings have come through the centuries our present day artistic, serviceable and durable wall textures including smooth, sand finish, moderately coarse, rough and rugged textures.

As with much other knowledge of civilzation the point of beginning concerning plaster and painted wall treatments is found in Egypt. There at first the plaster was crudely daubed on with hands and wood paddles, but later first class tools for producing a smooth finish were used.

Egyptian furniture and mummy cases dating back to 3000 B. C. give evidence of the knowledge of these ancients concerning the use of very durable paints put

on with crude brushes; the brush marks are still in evidence.

Such furniture and architectural features of buildings were built by hewing and hacking the timbers into shape. Then to gain a smooth surface a thick, plastic paint of the carriage painter's roughstuff type was put on, smoothed up or given an artistic texture and pattern. Then the surfaces were painted with durable earth colors.

Over the walls of tombs, such as that of King Tut recently discovered, the plastic paint and color coats used have endured through all these ages, even though the rock walls have disintegrated in places.

At later dates we find that during the progress of the Greek civilization this people learned to produce a smooth finish on their plaster. The Arabs and Persians, however, did not progress to this point and so the rough textures are very much in evidence in the architecture of these peoples.

In the beautiful architecture of the old Romans is found very artistic rough texture. The Roman plaster was of good composition and it was put on with no small measure of skill. Application was by daubing on the material with the hands and smoothing it out in that manner, working in the textures with the fingers. Clay modeled tiles were shaped with the hands and used on roofs as well as for interior trim.

In the later Roman periods the idea of stippling the plaster with rough tools came into use, as is evidenced by the uniformly stippled backgrounds on their bas-relief frieze decorations.

The objective toward which craftsmen have been working in all ages is that of producing plastered walls having an absolutely smooth surface . Having accomplished that we now find that such smooth, plain walls unbroken by texture, pattern or lights and shadows are uninteresting, monotonous and tiresome. And in these facts

we have the reason for the rapidly growing interest in rough textured walls, in mottled and blended color on wall surfaces.

The rough hand textures which hold most of interest in this day are those which are duplications of or interpretations from early English, Italian and Spanish architecture. From the Italian and the English Renaissance have come many fascinating textures. Such finishes from Southern Italy and from Spain are probably most celebrated.

The periods of strenuous religious and political upheavals in those parts of the world practically disbanded the plastering craft. Such plastering as was done during and following these times was accomplished by any workmen available. Few possessed enough skill to do a job of smooth plastering and so the materials were put on with their hands and crude wood paddles, then smoothed up as much as possible with their hands. Hence, the origin of the Palm Finish so popular today.

This method appears to have flourished until about the fourteenth or fifteenth centuries when crude trowels and wood floats were contrived. Their use continued for about two centuries. The sixteenth century saw the advent of better tools and the making of smoother troweled surfaces. The plaster was still coarse, however, and so the sweeps of trowel and float left their marks in the plaster finish. Gradually the making of very smooth plastered surfaces came to be understood and the style of rough textures was superceded.

The popularity of rough textured walls was of much shorter duration in England. With more stable political conditions the English craftsmen apparently learned more quickly after the introduction of plaster how to produce smooth surfaces.

The principal rough texture in use in England up to the fifteenth or sixteenth centuries was called "wattle and dab" plastering, presumably so called from the

manner in which the workmen drew the wood floats or trowels over the wet plaster like the wattle of a duck and then finished by dabbing with crude tools to finish. Also, laths were called wattles.

As between the great periods of architectural design in England little distinction can be made in the rough wall textures used. The textures known as Jacobean and Old English Plaster were practically the same as what we call "Sand-Float" today, although trowel marks were even more in evidence in the old finishes than is true today.

The Palm Finish of Old Spain is to be noted in ancient churches and also in the United States in the old Catholic Missions of the Southwest. The crude simplicity of unskilled workmen is greatly in evidence in all such work. The native Indians converted by the Spanish priests performed much of the work and these textures so unintentionally produced and mellowed with age present a charming appearance today. They are being reproduced to a great extent.

For Colonial architecture many believe that the use of certain bold patterned wall papers is strictly correct and the only means of finishing walls of such buildings. But as a matter of fact, the early Colonial architecture in New England also included Sand-Float wall finishes called Jacobean or Old English plaster at the time.

In addition to the historic and artistic wall textures which are identified more or less intimately with the established periods of architectural design, there are many others of modern creation. Some are adaptations from historic textures, while others are entirely new. Some are very artistic and beautiful in a restrained, quiet way, while others are so bold in character as to be suitable only for surfaces calling for novel and bizarre treatment for business reasons.

Howard Shaw, a prominent Chicago architect, who

has designed many buildings where antique textured finishes have been used, related an incident which suggests the origin of some of these finishes which have become so popular.

While in Italy Mr. Shaw was invitied out to the villa of an Italian countess. This villa was some distance from the city and, not knowing how much time the journey would consume, he started out early, arriving some two hours ahead of time. He found the Countess attired in old clothes and with the aid of her chauffeur plastering the walls of a hallway. The chauffeur being of a fiery, explosive Italian nature, objected to this occupation and was applying the plaster in the roughest way possible. In his anger the chauffeur produced exactly the finish the Countess desired!

THE WORKING METHODS

Materials suitable for producing artistic wall finishes must possess several qualities to be worth while, and that is true whether such materials are purchased prepared ready for use or mixed by the decorator after one of the formulas commonly used.

The material must be plastic, that is it must be soft and elastic enough to brush or trowel onto the surface, yet after a few minutes it must set stiff enough to be manipulated with tools or modeled with hands or fingers into the textures or decorative forms wanted. After which it must dry hard.

The next essential is that of durability. For some surfaces like window trim decorations, theater stage settings, show cards and signs, material may be used which is only moderately durable.

Wall decorations in homes and public buildings, however, ought to be executed only with materials of known permanence.

Most plastic materials are permanent for interior use

only, though some are permanent on exterior surfaces.

A plastic material may be of a fine or coarse grained texture. Those mixed by the decorator are usually of a finer texture than some of the ready prepared materials. The same general appearance of textured surface can be produced with both types of materials.

Plastic materials may be tempered to take the initial set only after a sufficient time has elapsed after being spread on a surface to permit working-in the texture.

Another essential quality is that of complete chemical stability. Materials which are chemically active with colors mixed into them or spread on the surface are not likely to prove satisfactory. Such action may destroy the colors completely or may cause discoloration or fading which gives a wall a spotty appearance.

Prepared materials are apt to prove more satisfactory than painter-mixed plastics, because they are more likely to be of uniform composition over long periods. That makes them easier to handle and assures durable jobs.

PREPARED MATERIALS

There are several brands of plastic wall coating material on the market and no doubt more will appear from time to time as an even more extensive use of rough textured walls is evident.

Textone.—One of these materials is called Textone.*

Textone was made to serve as a decorative coating over Sheetrock wall board, but is also used on plaster walls and most other wall surfaces.

This is a pure white, dry powdered material. It is mixed on the job with water and applied with a wall brush. It spreads freely and dries slowly enough to allow stippling with a brush or other tools.

Textone is an opaque coating which hides any prop-

* Textone, manufactured by the United States Gypsum Company, Chicago, Ill.

erly prepared surface of any color completely in one coat. According to its manufacturers, it makes a very durable, flexible and tough surface that should improve with age.

This plastic material may be colored by the addition of dry colors or regular tinting colors in oil. These may be mixed into the Textone before application to the surface. When the Textone is applied white the surface when dry may be painted the same as any plaster surface or glazed with transparent stain colors as described in Chapter X.

When dry colors are used they should first be mixed thoroughly in water before using them to tint Textone.

Colors ground in oil should be well mixed with turpentine to about the consistency of molasses before adding them to Textone. If mixed too thin there may be a little separation of the turpentine and it may float on top of the mixture, causing a little discoloration.

The color should be thoroughly strained through fly screen before adding it to Textone,—this to break up all lumps.

If a one coat tinted effect is desired, this mixture can be colored to certain shades. The following pigment colors, ground in oil, slightly thinned with turpentine (or dry colors dissolved in water), can be safely used. For red, use Venetian, Indian or permanent reds; browns and tans, use raw umber, burnt umber, raw sienna, burnt sienna; yellow or creams, use yellow ochre; blue, use cobalt or ultramarine blue; green, use cobalt green; black, use lamp black or drop black. Avoid Prussian blue, carmine and aniline colors. While chrome green and chrome yellow can be used, the decorator must handle them carefully and limit the quantities used. (*The pigment must first be dissolved and then added to the prepared Textone.*) Stir the Textone thoroughly to a uniform color.

Textone is marketed dry in 10-lb., 25-lb. and 50-lb.

fibre boxes. Each box contains a separate package of Textone size which is sufficient for the surface that can be covered with the Textone in the box; also directions for using, which should be carefully followed.

The covering capacity of Textone, like any other coating, depends upon how thick or thin it is spread on the surface. Approximately 1½ square yards will be covered by one pound of Textone in one coat when fine-grained stipples are used. For very rough textures more material is needed. One pound of Textone size will cover about 75 square yards.

One coat of Textone is usually enough, although for very rough textures two or more coats may be used, allowing each coat to dry.

The working method prescribed for the application of a one coat Textone grained stipple finish is as follows:

The success of the finished job will depend largely on the proper preparation of the surface to which the Textone is applied. All joints and nailheads in wall board must be covered with Sheetrock finisher. A semi-elastic scraping knife is the tool to use for this purpose.

After the surface has been prepared it is given a coat of Textone size, which comes with every package of Textone. When this size is dry, the surface is ready for the Textone.

Mix the Textone with lukewarm water to the consistency of heavy paste. Textone may be applied white or in color. If it is desired to color Textone, pigment colors in oil or dry colors are used. Pigment colors must be thinned with turpentine before mixing them in Textone. Pigment colors will be found to give greater variety than do dry colors, but either can be used safely.

Textone is applied with a common calcimine brush or, better, with a Dutch calcimine brush, which holds much more material. The Textone is brushed on the wall evenly and with as few brush marks as possible, but it must not be brushed out like ordinary paint.

When the Textone starts to set, or becomes "tacky," it is time to stipple, or work in the texture, which is done with a large wall stipple brush. A four-inch wall brush should be used around fixtures and in angles. For the stippling method see Chapter VI.

It is best to try out this finish on a piece of Sheetrock before starting the job, as this will insure getting the desired color and texture.

For a two-tone finish the working method should proceed as follows:

The general effect of this finish when viewed in a room is never repeating patterns of varying tones of light and dark shades over the entire surface. It can be easily seen that there is nothing mechanical about the effect, but rather it is the "accidental" effects which create the charm.

The process of application is simple. The walls are first properly prepared and given a coat of Textone size. Following the directions which come in the package, the white Textone is mixed into a thick putty and applied either with or without coloring.

The Textone is applied to the surface with a calcimine brush. As this begins to dry go back over the surface and stipple. The stippling is done with a sponge, stippling brush, ordinary paint brush, a piece of newspaper or the hand. Then allow the Textone to dry.

After the Textone is dry the little rough points of the stipple may be smoothed off with sandpaper or by rubbing the surface with a block of wood, although this is not necessary. Then give the surface a coat of Textone size. The surface is now ready for the Textone glaze color coat when the size coat is dry. So for the glaze coat use Textone glaze into which pigment colors in oil have been mixed. This is applied with a brush and wiped off again with a clean cloth. Do not rub the surface too hard, but leave the dark spots of color in the low places.

A finish of this kind may be washed and painted over again when so desired.

*Craftex.**—This is another plastic wall coating material which is capable of producing artistic finishes. It is suitable for application over any surface which can be painted.

The application of Craftex should proceed as per the manufacturer's instructions as follows:

PREPARATION OF THE SURFACE

Over Old Plaster.—All holes or cracks in the walls should be stopped with plaster or thick Craftex and allowed to dry thoroughly, then paint or size the new spots, in tones of the surrounding surfaces, before applying the Craftex, to prevent the wall from being spotty.

Over New Plaster.—Craftex can be applied directly over new plaster work, unless the plaster is unusually absorptive, in which case it will be necessary first to give the wall a thorough coat of size to kill the suction.

Over Paint or Water Color.—Wash the surface free from dirt or grease and remove all loose portions or blisters by scratching with a wire brush or by the use of paint remover. Kill glossy surfaces with a solution of one pound of washing soda to a pail of water. If the wall has been waxed, this must be entirely removed. Water color must be washed off thoroughly.

Over Paper.—Remove the paper if there is any doubt that it does not adhere firmly to the wall or if the surface underneath is unsound. Where the greater part of the paper is in good condition it may be left on the wall, providing all loose portions are pasted down firmly or are torn away, leaving a slightly ragged edge. Wipe off any dust with a dry or damp cloth. A somewhat heavier application of Craftex will be required where a

* Craftex is manufactured by The Craftex Company, Boston, Mass.

portion of the paper has been removed than in cases where the surface is perfectly even. Craftex should not be applied over wallpaper containing dyes soluble in water, in any case where the color of the dye in the Craftex would be objectionable. The presence of such dyes may be determined by moistening the paper; if the color runs a stain will show in the Craftex.

Over Wall Board.—Joints may be filled or taped. The manufacturers of some wall boards supply a special joint filler with the board. Craftex can be used very successfully for this purpose. Prepare the Craftex in the usual way by adding warm water and allowing the mixture to cool, but prepare the mixture thick like putty. Apply the Craftex in the joints with a putty knife and allow it to harden. If the joints still show in places, a second application will completely cover the depression. If a fine stippled texture is to be applied, it will be advisable to sandpaper the joints, thus producing a smooth, even surface over which to apply Craftex. Although Craftex can be applied to the surface of any wall board without preliminary preparation, it is always advisable first to give the board a coat of sizing unless the board is sized by the manufacturers, in which case it will be necessary to size only the joints. Sizing stops the suction of the wall board, thus facilitating the spreading of the Craftex and insuring an even textured effect.

APPLICATION

First Coat—Craftex.—Mix the Craftex powder with warm water in the proportion of 1½ gallons of water to 10 pounds of Craftex, or approximately one part of water to two parts of Craftex by volume. Stir the whole mass vigorously. The mixture will have the consistency of a smooth paste. Craftex should not be mixed thin like paint or water color. Allow at least two hours for the powder to become thoroughly dissolved and for the

solution to become cold. To prevent hardening in the pail, place a damp cloth over the top of the pail, or cover the surface of the mixture with a small amount of water, which can be poured off when the mixture is to be used. For one coat work, add dry colors dissolved in water, or preferably colors in oil, to the solution. The colors in oil should be slightly thinned with turpentine.

Apply Craftex with an old ceiling or wall brush. Allow to set a little, then stipple with a stippling brush, sponge, crumpled paper, or dabble with flat side of the brush to obtain desired texture. Smoothing off the high spots with a piece of wood or tin gives troweled effect.

Sandpapering.—Craftex under ordinary conditions will dry thoroughly over night. When dry it should be sandpapered slightly before the coat of Lacquersize is applied.

Second Coat—Lacquersize.—Mix Lacquersize by dissolving ¾ pound of Lacquersize to a gallon of boiling water. Stir occasionally until thoroughly dissolved. Use when cool.

Apply with a soft flat brush over Craftex, being careful not to leave any uncovered places.

Third Coat—Craftcoat.—Mix with oil colors to obtain any desired colors. The oil colors should be slightly thinned with turpentine.

Apply with a brush over Lacquersize, after the Lacquersize has been allowed to dry.

Wiping.—After the Craftcoat has set a little, wipe the entire surface with a soft cloth stretched over a block of cork or wood to bring out the high lights of the Craftex.

Covering capacity.—The covering capacity of Craftex is entirely dependent upon the type of texture desired and the condition of the surface over which it is applied. The average textures of medium stipple, brushed and troweled effects require in the vicinity of one pound of Craftex to two square yards of surface.

Lacquersize.—One pound of Lacquersize will cover from fifty to sixty yards of surface, according to the texture of the Craftex.

Craftcoat.—One gallon of Craftcoat will cover approximately forty yards of surface, depending on the texture to be covered.

Cautions.—Sponge off spatters on finished woodwork at once. Do not allow to harden on woodwork. Avoid the following colors: Carmine, Prussian blue and those colors containing it, such as Marseilles green, etc.

*Decorite.**—Another brand of plastic wall finishing material. It should be used in a similar manner to that employed for other plastic materials. Follow the manufacturers directions in details.

Covering Capacities.—Decorite will cover from 1 to 3 square yards of surface per pound. Figures will vary according to texture desired and the condition of the surface.

Decosize covers approximately 50 square yards per pound.

Decoglaze covers approximately 45 square yards per gallon.

DIRECTIONS FOR APPLYING DECORITE

1. *Preparation of Walls.*
   (*a*) On new work Decorite can be applied over brown coat of plaster, thereby eliminating the expense of skim coat. The brown coat should be troweled as smoothly as possible.
   (*b*) In remodeling, cracks should be filled with plaster paris. It is advisable to color over the plaster paris as nearly as possible the same shade as the surrounding surface, varnish sizing the entire surface before applying Decorite.
   (*c*) Have all surfaces free from dirt and grease.

* Decorite, manufactured by The Decorite Company, Cambridge, Mass.

(*d*) Glossy or enameled surfaces should first be killed.

(*e*) Sheetrock, Bestwall, Compoboard and other non-shrinkable wall boards should have all joints and nailheads filled and sandpapered smooth.

(*f*) All surfaces to be Decorited should first be sized, preferably with a varnish size.

(*g*) Do not use a priming coat over surfaces to be Decorited.

2. *Decorite.*

(*a*) Mixing—To one pound of Decorite powder add a little less than one pint of cold or warm water; stir vigorously. Allow to stand three-quarters of an hour before applying.

The above proportion is the ideal mixture for the medium textures. For heavier or finer textures less or more water should be used.

(*b*) Applying.—Apply Decorite with a wall or ceiling brush; spread smooth over surface and then texture by any of the following methods.

1. Stippling.—Use regular paint stippler to obtain fine or coarse stipples.
2. Brush Textures.—Use flat side of wall brush. The manner of manipulating the brush, either slapping, pushing, or dabbling, produces interesting effects.
3. Sponge and Paper Textures.—By dabbling with a sponge or paper crumpled in a ball, unusual and uniform textures may be had.
4. Troweling.—Decorite applied fairly rough with a brush, then lightly troweled gives very interesting antique plaster effects. Decorite will harden sufficiently in twelve hours or over night to be ready for sizing and glazing with Decoglaze.

3. *Sandpapering.*

   After Decorite has set sufficiently hard, sandpaper surface lightly with a fine grade of sandpaper. This will take off all rough edges and give a very smooth surface. Light troweling will facilitate sandpapering and give much the same effect.

4. *Sizing.*

   (*a*) Before glazing size Decorite with Decosize.

   (*b*) To prepare Decosize, add one pound of Decosize to five quarts of boiling water, allow to boil, stirring until thoroughly dissolved. Strain through cheese-cloth if necessary.

5. *Decoglaze.*

   (*a*) Decoglaze is an oil medium for obtaining beautiful, artistic and durable effects over Decorite. Add colors ground in oil to Decoglaze to get the desired tints. Apply in the same manner as ordinary paint, wiping surface with clean cloth pads. With Decoglaze, colors can be blended to perfection. To obtain very light colors a little white paint may be added to the glaze.

   (*b*) For very light colored finishes, a coat of white paint is advisable in place of sizing with Decosize. This will bring the highlights out very clearly when wiped, also giving a more permanent finish.

6. *One Coat Work.*

   For an economical finish Decorite can be applied in one coat by adding dry colors to the Decorite powder. In mixing dry pigment colors dissolve first in water and then mix with Decorite. Stir thoroughly. Prepare walls as stated above. Stippled or rough ceilings can be produced in the same manner. Add linseed oil for increasing resistance to moisture.

Caution: Woodwork should be carefully protected from Decorite. If woodwork is spattered wipe immediately with sponge.

Mix to consistency of heavy paste. Decorite should not be mixed thin like water color.

Do not let Decorite or Decosize stand in solution more than two or three days.

*Compostipl** is a hard-drying pigment stippling composition, particularly adapted for spray work. It produces a hard, tenacious coating that adheres to metal, wood and composition surfaces permanently. It also forms a perfect foundation from which finishing coats of lacquer, varnish or enamel will not chip or peel.

Thinning and Spraying.—Compostipl comes in paste form weighing 14 lbs. to the gallon. For spraying it is thinned to a flowing semi-paste consistency with naphtha or benzine. One pint of naphtha is sufficient to reduce one gallon of Compostipl for average work.

Forty pounds air pressure and upward is necessary for stippling, and the nozzle of the gun should be held at least 12 inches from the surface being sprayed. For coarse, heavy textures use the Compostipl at heavy consistency and low air pressure. For fine texture work increase the air pressure and thin the Compostipl.

By variation of the consistency and the air pressure with a spray gun it is possible to obtain a variety of effects from that of fine sand paper to the texture of stucco.

Drying.—The stippled surface requires two hours air drying to set for handling. It dries thoroughly in 24 hours for lacquering or enameling. The drying may be forced at 150° F. in ovens in four hours if speed is required. Compostipl sands readliy. Some strong lacquers may soften the Compostipl temporarily, but if it has been dried thoroughly before their application

* Manufactured by Finishing Specialties & Service Co., Chicago, Ill.

this does not lessen the durability of the finish in the least.

Adaptability.—Compostipl is adaptable to any finishing process where beauty of surface, economy and large scale production are prime requisites. The labor operation of surface preparation is absolutely eliminated except for removal of traces of oil or grease. It fills rough places and sticks tenaciously to rough wood, polished metal, composition, or even glass.

Compostipl is produced regularly in natural (buff) color. When required it is also made in white, black, gray and special colors at a slightly higher price.

Compostipl may be put on a surface with a flat wall brush and be stippled with a stippling brush, sponge or other tools to make rough textures.

*Stippaleen.**—This is a strong, tough and elastic paint filler having plastic qualities. It is made in three distinct grades of density—liquid, semi-liquid and paste. Each grade has its own peculiar uses in the field of decoration. The paste and semi-paste forms are of greatest interest to the decorator considering rough-textured wall finishes.

Stippaleen was first used as a rough filler coating for polychrome-finished articles such as floor lamps, book-ends, picture frames, candle sticks, chairs and many other items of furniture.

One of the valuable qualities of this material is that it will resist the solvent action of lacquers. Lacquers which produce very fine and durable surfaces have given some difficulty because of the chemical action which prevented their use on ordinary painted surfaces. The solvent property of lacquers is produced by amyl acetate which is one of the component parts of lacquers and one of the principal agents used in paint and varnish removers. When

* Manufactured by Indiana Indestructible Paint Co., Chicago, Ill.

lacquer is applied over ordinary painted surfaces the undercoats are loosened and raised from the surface, and they can readily be removed by wiping or scraping with a putty knife. Stippaleen used as the undercoat, or filler, is said by the manufacturers of the product to resist this solvent action.

Stippaleen may be brushed onto a surface in the ordinary manner and may be stippled with brushes, or worked into artistic textures with the other tools mentioned elsewhere as commonly used for this purpose.

This product is made in a light tan shade and also in a dark gray. Glaze and stain coats, or opaque coats of paint may be used over Stippaleen and wiped out, blended or highlighted as with other plastic finishes.

Stippaleen will withstand high temperatures and extreme cold. It is marketed in paste or liquid form rather than as a dry powder. This material may be applied on any rough or smooth wood, plaster, metal, paper, canvas, leather or other surface.

*Stuc-O-Tint.**—A plastic wall coating material for use in coating smooth and rough walls, old or new smooth plaster, sand finish, canvas, burlap or wall paper (firmly attached). It is useful for producing rough and artistic wall finishes with textures worked in with a brush, by hand, with trowel, sponge or other tools. Like the other plaster materials described, it is put on with a brush.

The manufacturer's directions read as follows:

Mix powder with water to a consistency governed by thickness of texture desired.

If it is to be used immediately it should be mixed with hot water and allowed time to cool before applying. If mixed with cold water it should be allowed to stand about twelve hours so that all ingredients will have time to dissolve. Water should not be colder than

* Manufactured by Bradley Stuc-O-Tint Company, Inc., Boston, Mass.

seventy degrees. It will not change in consistency by standing and will not harden unless it has been allowed to stand for an unreasonable time. It will dry hard in from six to twelve hours.

After Stuc-O-Tint has thoroughly dried, if the fine edges or points are objectionable, sandpaper lightly and it is ready for finishing.

If a glazed or stained effect is desired, mix color required with Stuc-O-Glazing-Liquid to make shade, apply with brush and wipe off with rags as much as necessary to obtain the desired finish.

A blending of colors can be made by spotting of other colors over the above surface while wet and working into the texture and wiping off.

If a flat finish is desired, apply one coat of paint and you will have a flat eggshell finish.

If applied upon a surface where an extraordinary amount of dampness exists, it should have an extra coat of dead flat varnish or polish with wax.

If a waterproof finish is not necessary, tint Stuc-O-Tint before applying with dry or oil colors, apply and stipple or texture with tool to get desired effect.

If applying over old wall paper be sure and scrape off all loose places before applying. If wall paper has colors that may bleed through, apply a coat of varnish size over old wall paper.

No sizing of other surface is necessary before or after applying Stuc-O-Tint. All elements necessary to stop suction or effervescence are contained in the powder.

Stuc-O-Tint will cover from ten to twenty-five square feet to a pound, according to the thickness of texture used and surface upon which it is being applied.

*Morene.**—A portland cement product which is plastic and intended for producing rough wall textures.

---

* Morene, manufactured by Morene Products, Inc., New York, N. Y.

Morene is an emulsion based on white portland cement, sand and asbestos so combined that the ingredients remain in suspension. Morene readily lends itself to the production of unlimited varieties of color combinations and textures, including stipples, sand finishes, tapestry effects, caenstone, travertine, limestone and unpolished marble.

This plastic material can be used wherever permanent artistic expression for either exteriors or interiors is desired—whether it be in a modest home or the most palatial mansion or institution.

It may be applied with a brush or a trowel on any brown or white plaster coat, on wood or old painted surfaces, sheetrock, any wall board, or metal.

Morene will not crack or check and may be scrubbed with soap and water.

Flat Wall Paints.—Some of the prepared flat wall paints on the market can readily be adapted for use as a plastic wall coating in rough textures. Not all such materials are suitable,—only those having a long oil binder, those which spread out easily and are usually made from treated linseed oil as the flatting liquid.

To the flat wall paint you simply add enough dry whiting or clay to make a thick plastic coating which may be brushed or troweled onto a surface.

Painter-Mixed Materials.—For a great many years skilled decorators have been making plastic wall coating materials for rough textures. Formulas for such materials are rather numerous. Indeed, some decorators do not always make the plastic the same way twice in succession, depending upon what materials are handy.

Plastic mixtures for this and similar purposes are called simply plastic composition, or compo, or Swedish putty. The German decorator calls it *spechtelkitt,* while Italian decorators for ages have used what is known as Italian *gesso,* a very durable composition. Then there is another composition called *scagliola* made to dry quite

hard and to be polished to imitate marble or other stone. *Pargetry* is still another name for a plastic composition.

The disadvantage experienced in using painter-mixed compositions comes from indifference about working to an exact formula of known durability. Decorators are inclined to guess at quantities and to use any one of several materials which will produce the desired plastic qualities. In consequence some jobs done with such materials crack or chip off in a few months or weeks after completion.

A bit of experimenting and testing of various material compositions and proportions, measuring by weight all ingredients and keeping records will develop exact formulas for plastic compositions which are durable. Then each batch should be mixed by weight using exactly the same materials every time.

It is at this point where manufactured ready prepared plastic compositions are likely to be superior. They are made in large quantities from raw materials of known composition and which remain constant. Then, also, the prepared materials are mixed in dry form so they will keep indefinitely.

The decorator can also mix large batches for large jobs to gain uniformity, but the material must be used immediately or it will set hard in the keg.

Swedish Putty.—The formulas for Swedish putty as commonly used differ. Here are some of them:

Outside gloss paint
Add a little dry whiting or calcimine
Add a little dry china clay or fine sand
Glue dissolved in warm water
Dry color to tint.

Another formula:

2 lbs. bolted whiting
2½ lbs. well cooked flour paste
½ pint boiled linseed oil
Knead until a smooth, soft putty is made.

Another formula for Swedish putty used to some extent is a mixture of:

Prepared flat wall paint, enamel or varnish
Dry whiting, or calcimine
Glue dissolved in water
China clay, enough to make plastic.

One more formula for Swedish putty:

1 lb. glue
1 gal. warm water
2 lbs. whiting
2 lbs. plaster of Paris
1 lb. white lead in oil
Dry color to tint
Mix and thicken with dry whiting or warm water.

A fourth formula for Swedish putty:

1 lb. plaster of Paris
¼ lb. dry white lead
2 tablespoonfuls of bi-carbonate of soda (baking soda)
Dry color to tint
Mix with hot water to thick consistency.

Still another plastic composition akin to Swedish putty is made by mixing:

Glue dissolved in hot water
Rosin, dry
Whiting, dry
China clay

Italian Gesso.—Many of the fine old works of art which have come down to us from the ages past were formed in part at least from a very tough and durable plastic composition called gesso. Such furniture as picture frames and panel mouldings as well as some statuary and other works of art were constructed largely of gesso.

The formula for mixing gesso as far as we moderns know is this:

⅓ gelatin glue
⅔ dry whiting
A few drops of raw linseed oil
Dissolve glue in hot water;
Add whiting and linseed oil while the glue is hot. Mix thoroughly. When cold if it is too stiff to spread, heat again and add more water.

While gesso sets reasonably soon and is durable enough immediately for window trim backgrounds and other temporary work, it is not the best plastic for wall textures. It takes years to become hard enough and durable. The addition of a little lead, enamel, varnish or gloss paint to the formula given makes a durable material in less time.

Tools Used.—Both painters' and plasterers' tools are used in producing rough textured wall surfaces. Many unusual tools also are used for producing textures or patterns.

On Plate 33 are shown the tools most commonly used for making rough textures on walls.

Preparation of Surfaces.—New and old surfaces should be prepared for rough textured finishes in exactly the same manner as for painting. Chapter IV presents all necessary information about this work.

Ground Colors.—Dry colors or colors ground in oil may be mixed in with the plastic wall material or the ground color may be painted on after the rough coat is dry.

Glaze Colors.—Rough textured walls may be beautifully decorated in transparent or glaze colors as recorded in Chapter X.

Costs and Prices.—The material cost for a grain stippled coating with a transparent glaze finish ranges from 20c to 50c per square yard when prepared factory made

Plate 33.—Tools Used for Producing Rough Texture Wall Finishes.

materials are used. It is commonly figured that 50c per square yard is a safe average cost to the contractor for labor and materials. To this must be added labor cost, overhead expense and profit.

Prices charged for this decorative work vary from $1.00 to $5.00 per square yard.

Holland Plaster Wall Finish.—Plates 34 and 35. In this finish which represents the historic textures in old Dutch houses we have an unusually artistic treatment. While it is strikingly beautiful in itself the color and texture can be so held in restraint as to permit its use in rooms of greatly varying types of architecture whether formal or informal or of an extreme novelty character.

The particular room from which the photographs—Plates 34 and 35—were taken were decorated by a firm of Chicago decorators, R. S. Adams & Company, which has had extensive experience in producing rough and artistic textures in wall finishes.

Materials and Tools.—The material used on this job was a Swedish putty mixed in the shop from outside gloss white paint, calcimine, glue, China clay and color.

The plastic material was mixed to a cream color. It was put on with a plasterer's trowel (See Plate 33), using a plasterer's hawk or mortar board (See Plate 33) to carry the material. The plastic material was handled just as a plasterer handles his material. However, it was not troweled to a smooth surface but rather the raised and rough edges left by the trowel at the end of each stroke were allowed to dry in that form, giving the appearance of torn edges of paper.

After allowing two or three days for thorough drying the surface was glazed over with Vandyke brown mixed to a thin stain with turpentine and a little boiled linseed oil. This glaze stain coat was brushed on in the ordinary manner with a flat wall brush and was stippled

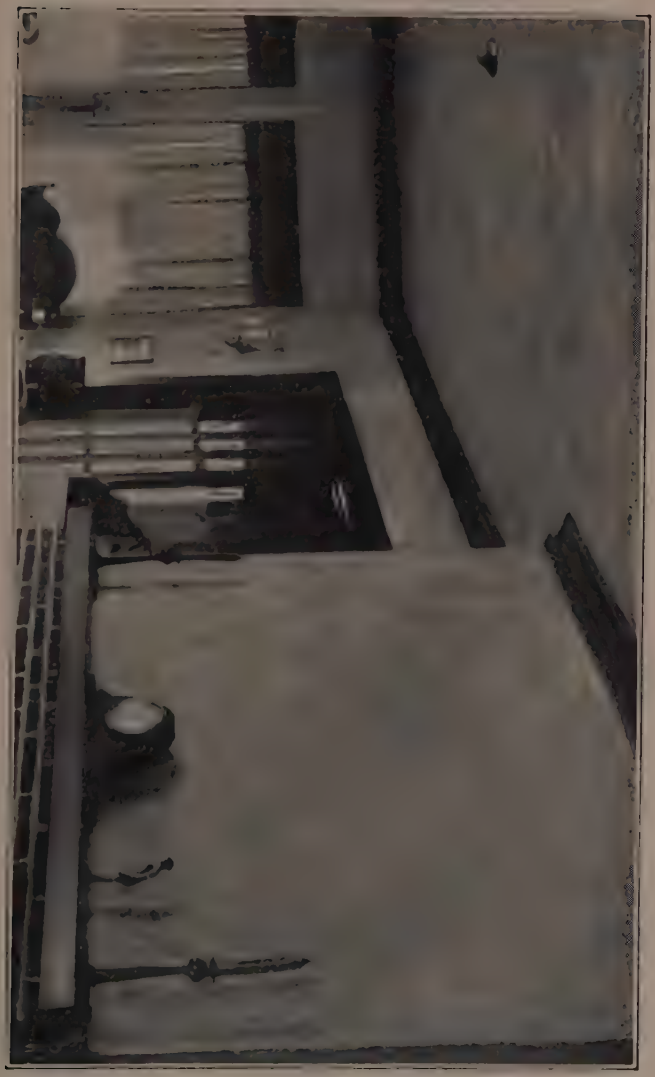


Plate 34.—A General View of Holland Plaster Wall Texture.

Plate 35.—A Close-Up View of the Texture of the Holland Plaster Shown in Plate 34.

with a stippling brush while wet. A wad of cheese cloth used for stippling also gives a nice effect on this surface.

When the glaze stain coat was dry a piece of No. 1 sandpaper wrapped around a square block of wood was used to rub over the high points of the rough edges on the wall. This sandpapering must be done lightly and deftly. Just enough pressure is exerted on the sandpaper to nip off the brown stain coat from the high

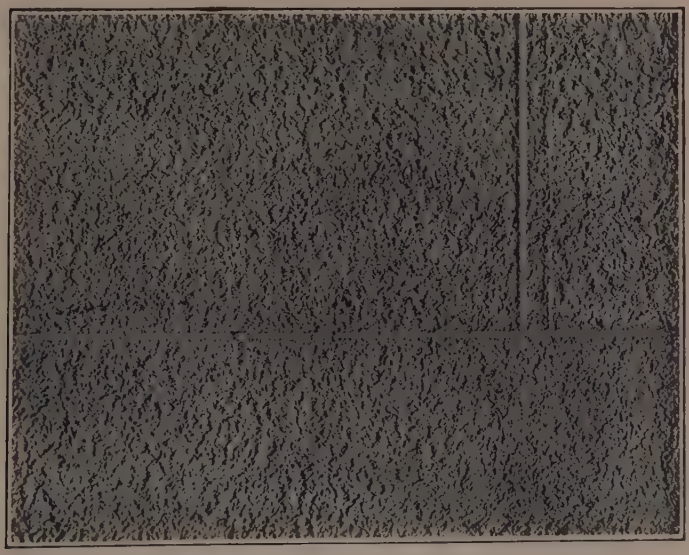


Plate 36.—Close-Up View of French Caen Stone Finish.

edges and allow the cream colored undercoat to show through in irregular streaks.

The wall was next dusted off and a coat of starch was brushed on to finish the job. For the starching method see Chapter VI.

French Caen Stone.—Plates 36 and 37. This texture and its cream color are indeed popular. It is essentially a formal treatment and is used extensively in homes

of more pretentious architectural type, in such public buildings as hotels, clubs, restaurants, libraries, etc. Caen stone is especially in evidence in theatre and hotel foyers and lobbies and is much used for window display backgrounds in retail stores.

Caen stone is being quite generally used with Roman and Greek forms of architecture, although this is not authentic.

As a rule Caen stone is marked off in blocks 18 inches wide by nine inches high to appear like the artificial stone with close mortar joints. But when this finish is used in bath rooms and kitchens it is usually marked off to represent bricks of ordinary size or tile about four or six inches square.

Materials and Tools.—This texture is best produced by using the plastic materials which have a grain or slightly coarse character. When painter-mixed materials are used a little fine sand (not beach sand) should be added to the mixture.

The coloring material to use is yellow ochre in dry form or ground in oil.

A calcimine brush is used to apply the material to the wall and the brushing ought to be done as evenly as possible. When the material starts to set and get sticky, which will be in from five minutes to half an hour, depending upon the mixture, temperature and ventilation, stipple the whole surface with a stippling brush. Read Chapter VI about stippling paint and follow the same method. The job is then ready to be marked off with lines, or it may be allowed to dry as finished without lining.

Marking Off the Mortar Joints.—To accomplish the marking considerable care must be taken or a crude effect may result. In the first place mark off guide lines on top and bottom and both side edges at distances exactly measured. Next use a chalk line to snap lines on the wall in the vertical and horizontal directions. Two

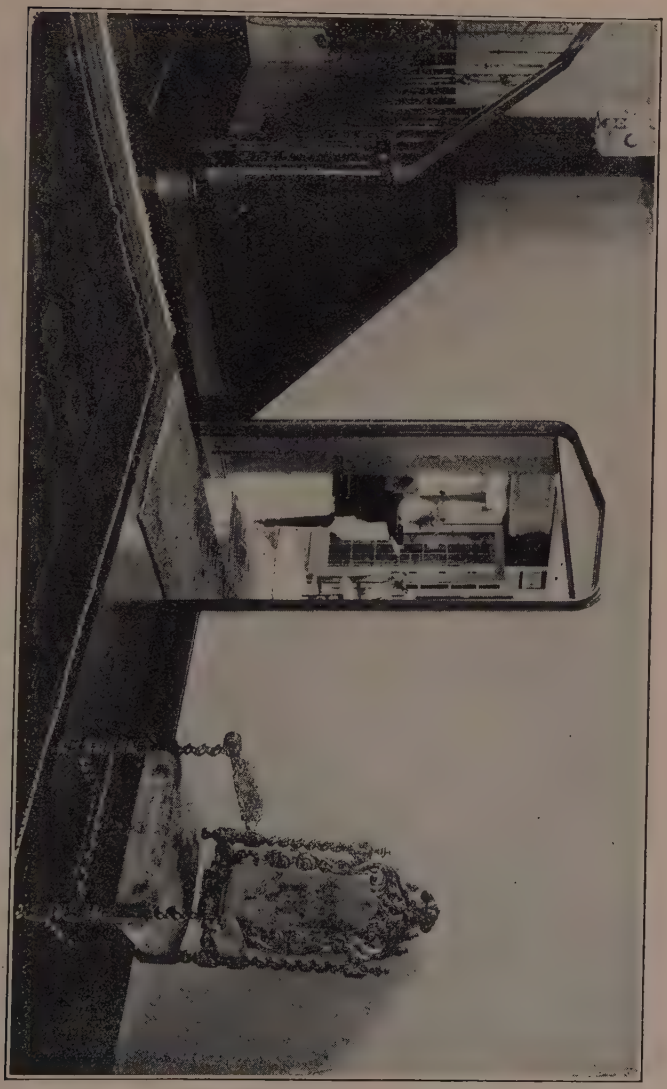


Plate 37.—A General View of French Caen Stone Finish Marked Off in Blocks.

Plate 38.—Old English Plaster Finish as Reproduced with Plastic Paint.

Plate 39.—Early Colonial Plaster Produced with Plastic Paint.

men can do this quickly. Cover the line with chalk. Then one man holds the line on the mark at the top of the wall while the other stretches the line and places it on the mark at the bottom of the wall. Next, one man takes hold of the tightly stretched line, pulls it away from the wall about six inches and lets it snap back against the wall. Thus a straight chalk mark is put on the wall. This operation is repeated on every set of guide marks in both directions.

Having the wall marked off with guide lines take the straightedge, shown on Plate 33, with nails in each end and place it firmly on the surface along one of the chalk lines. Hold it firmly with the left hand. With the right hand drag a blunt tool through the wet paint along the straightedge. This blunt tool may be metal or a piece of hard wood cut to a square edge, about three-sixteenths of an inch wide, like a screw driver, or, better yet, take a six-inch saw file and smooth both sides at one end on a grindstone. Break off about one inch of the file before smoothing the sides. The straightedge may be from three to six feet long, whatever size is most convenient to handle. The finishing nails are driven through the wood just far enough to hold the wood straightedge away from touching the wet paint.

Old English Plaster.—Plate 38. Various textures are correctly mentioned under this name as there were naturally some variations in the finishes used during and previous to the fifteenth and sixteenth centuries.

The sand-float finish commonly used today is one of the later developments. It was sometimes called Jacobean and in America it is referred to also both as Old English Plaster and Early Colonial. Note Chapter XI for illustrations of sand-float finish.

Previous to the sixteenth century the plaster finish in England is referred to as "wattle and dab." While we have no authentic photographs of that finish, it is probable that it had a similar appearance to Plate 38.

This texture was smoothed by wattling and dabbing with the plasterer's wood trowel and darby shown in Plate 33. The material was put on with a calcimine brush.

Early Colonial Plaster.—Plate 39. The early American colonial homes were often plastered with a texture which is well represented by our sand-float plaster of today, described in Chapter XI. It was in some instances called Jacobean.

The texture pictured on Plate 39 is an early colonial which is a reproduction in Craftex of the old Paul Revere house in Boston.

This texture may be produced by brushing on the plastic paint with a calcimine brush in a thick and thin manner. When it has set quite a little rub over the material in all directions with a bricklayer's small pointing trowel as shown on Plate 33. Then immediately stipple the whole surface with a whisk-broom and after that again smooth up the high points here and there with the pointing trowel.

Spanish Palm Finish.—Plates 40 and 41. As with other finishes more than one texture is identified by this name. They are the finishes which result from putting a stiff, plastic material on the walls with the hands or a rough, wood plasterer's trowel and then smoothing up the surface by pressing it into shape with the palm of the hand.

On Plate 40 is pictured such a texture as may be found in some of the old Spanish Mission Church buildings. The work was done in a crude way and apparently the very ruggedness of the texture is responsible for its charm.

Palm finish is being used a great deal for hotel lobbies, halls and in other public buildings.

Plate 41 is also a palm finish produced with Textone by first brushing the material on in a slap-dash manner, then by roughly smoothing out the material with an

Plate 40.—Spanish Palm Finish Done with Plastic Paint.

Plate 41.—A Palm Finish Produced with Hand Brush.

Plate 42.—Close-Up View of Wickham Palm Finish.

old brush and the palm of the hand the texture was gained.

Palm finishes are usually done with an ivory colored material over which a raw umber glaze stain coat is brushed as described in Chapter X. While the glaze coat is wet the surface is wiped off with a cloth, removing it from the high spots and allowing it to remain in the depressions.

Wickham Palm Finish.—Plate 42. A noteworthy texture of considerable beauty for panel centers, especially. The fine and delicate character of this pattern makes it suitable for bed room panels and for use in any room of small proportions or where a light texture and dainty, fragile effect is needed. This texture has been called the Wickham palm finish because it is of unique character. From among a great number of artistic textures studied by the author no other has been found quite like this one produced by George Wickham. Mr. Wickham is a most resourceful decorator who is also skilled in ornamental plastering.

Note Plate 43. The working method followed to produce this texture by Mr. Wickham, a decorator from the shop of R. S. Adams & Co., Chicago, was simple, but required good judgment in tempering materials and an artistic sense of fitness of textures to the room. The photograph was taken of a part of a wall panel in a bedroom of an average home.

The materials used was Swedish putty mixed with a little more flat wall paint than usual to make it more sticky. The plastic putty material was brushed on in the usual way, using a flat wall brush.

When the material had set a few minutes and was quite sticky the decorator's hand was used flat on the palm to produce the texture. The palm was pressed firmly against the sticky paint and pulled straight away. Each time this was done several little rough ridges were

left on the surface. This was continued until the whole panel was interestingly textured.

The paint, or Swedish putty, to be more accurate, on this job was tinted ivory white with raw sienna and a touch of American vermilion to add a slight pink

Plate 43.—A General View of Wickham Pale Finish Used for Panel Centers.

glow. Enough turpentine was used to make it dry without gloss.

When the rough texture was thoroughly dry it was given a very thin glaze of pink in a few faint clouds here and there. The panel mouldings, the stiles between

Plate 44.—Roman Travertine Finish Marked Off In Blocks.

panels covered with canvas, the electric light fixtures and the wood trim all were painted flat with the ivory white having the slight pink blush to it.

This job of rough texture wall finishing was done on old smooth plaster walls from which wall paper was first stripped off.

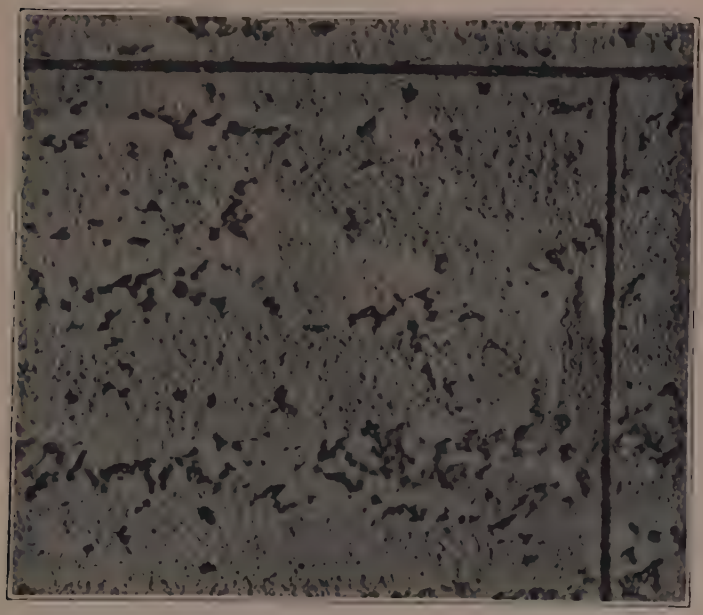


Plate 45.—Close-Up View of Roman Travertine Texture.

Roman Travertine Wall Finish.—Plates 44 and 45. The travertine finishes are of such ancient origin that there is no certainty today about the exact textures. The finishes, however, were probably named after the rock travertine quarried in Italy for building purposes. It is a porous, light yellow rock which hardens on exposure. It is extensively used in theaters, clubs, hotel

lobbies and other public buildings. It is a little less formal than Caen stone but is similarly used.

Materials and Tools.—This finish can be produced with any of the plastic putty and paint materials. The wall shown on Plates 44 and 45 was decorated with Craftex.

The tools required are those pictured on Plate 33,—calcimine brush, whisk-broom, bricklayer's trowels.

The plastic material is brushed onto the wall in the ordinary manner, taking care to spread on a thick, even coat. When the wall has been coated begin immediately to stipple the surface with a whiskbroom, or a coarse scrub brush.

Having the whole surface stippled with the whisk-broom, allow the material to set slightly then take a bricklayer's trowel and lightly skim over the surface with it. Rub the surface in horizontal streaks only and bear down on the tool only enough to pile up the material in streaks to form the open pits in horizontal groups.

When the texture is all worked in the next task is to mark off blocks with lines as was described for Caen stone.

After the surface is dry, brush on a thin glaze stain coat mixed from raw umber, turpentine and a very little boiled linseed oil. Brush this coat out evenly. When the stain glaze has all been brushed on rub over the surface with a cloth to remove some of the stain from the high places, allowing it to remain in the pits and other depressions.

The plastic ground coat for this finish should be tinted a light cream color with yellow ochre or raw sienna.

Italian Plaster Finish.—Plates 46 and 47. Many textures and color effects may be called Italian plaster, but the photographs used for these two plates represent one of the popular and beautiful textures. It is especially suited to Italian and Spanish architecture and harmonizes with the less formal architecture everywhere.

Plate 46.—General View of Italian Plaster Texture.

Materials and Tools.—All plastic materials mentioned can be used to produce this effect. The material is brushed on in the ordinary manner with a wall or calcimine brush. Next it is stippled, but not uniformly all over, with the regular stippling brush shown on Plate 33 with the other tools.

The material is now allowed to set up a few minutes

Plate 47.—Close-Up View of Italian Plaster Texture.

to get a bit sticky. Next, an old, short bristled wall brush is used in all directions and moving in a semi-circular manner. The material is piled up here and there by the brush. Allow this texture to set a few minutes so it will hold its shape, then with a plasterer's steel trowel lightly skim over the high places. Light

touches with the tool will be sufficient to produce the smooth areas.

The ground coat, the plastic material, on this finish is tinted ivory white with raw sienna or yellow ochre.

When the texture is dry the surface is glazed over with a glaze stain of a bright yellow color. The stain may be mixed from raw sienna with a touch of vermilion or orange chrome yellow.

When the stain has set a little wipe over it gently with a cloth to remove the stain from the high ridges and allow the ivory ground color to show through.

Roman Tile Finish.—Plate 48. Clay tile was used by the Romans for interiors as well as for exteriors. The finish of such tile was produced by drawing the fingers down through the wet clay.

This texture has but limited use today, obviously, because it has principally a novelty appeal.

To produce such a texture it is only necessary to brush the plastic material on thick, allow it to set a few minutes to become sticky and then drag three fingers down through the material.

Brushed and Smoothed Textures.—Plates 49, 50, 51 and 52. There appears to be no limit to the variety of textures possible of production by manipulating brushes.

The sun parlor pictured on Plate 49 shows what has been done under difficult wall surface conditions. The large wall in this picture is yellow pressed brick and, yet, see how completely the mortar joints have been covered with a Swedish putty plastic material mixed by the decorator on the job, George Wickham, Chicago. Two coats were needed. The first coat was a sand-float finish done with the same plastic putty and sand as described in Chapter XI.

The second coat on this job was a Swedish putty mixed thick without sand as previously described. The material was tinted cream color and brushed on with

Plate 48.—Roman Tile Finish Done with Plastic Paint.

Plate 49.—A Brush Texture Done in Plastic Paint Over a Brick Wall. A Sand-Float Finish Was Put on First.

a flat wall brush. The material was allowed to set until it became sticky and was then worked into the texture pictured on Plates 49 and 50 with an old short bristled, flat wall brush.

The surface was worked over using the brush in a

Plate 50.—A Close-Up View of the Texture Shown on Plate 49.

semi-circular manner. Later when the material had set more a plasterer's wood trowel was used to put on the finishing touches. The wood trowel was pressed into the heavy coat of plastic paint, pulled off straight a little and then shifted down or to one side or other to

drag the material as indicated. The material is easily drawn out into sharp points with a wood trowel.

After the plastic coat became dry it was glazed over with a stain coat of dark brown, burnt umber or Vandyke brown. The stain was wiped off judiciously here and there to give a clouded or antique effect. See Chapter X for glazing method.

Plate 51 pictures another similar finish. It can be produced by brushing on the plastic material as usual with a flat wall or calcimine brush. Rather a thick coating is needed.

When the material has set a few minutes and is getting stiff stipple it all over with a whiskbroom or old wall stipple brush. Make the surface just as rough as possible. When the material has set considerably and is very sticky it can be drawn up to sharp, rough projections with a stippling brush or a plasterer's trowel. Then with the trowel skim over the surface to smooth down the roughness in places for the finish.

The rough coat is colored light as a rule and is glazed over when dry with a dark stain coat which is wiped out to mottle it.

Plate 52. In this texture we have one which is very rugged and which is suitable only for large rooms. The texture is very contrasty.

This finish is produced by coating the surface with the plastic material, using a flat wall brush or calcimine brush.

When the material has set a little stipple it all over with the stippling brush (Plate 33).

Next take an old stiff wall brush or whiskbroom and use it in half circles as indicated by the picture. Let the brush plow up a pile of material at the end of each stroke. Draw this pile to sharp points by pulling the brush straight away from the surface at the end of each stroke. Let the material dry in this texture. Then with a piece of No. 1 sandpaper on a block of wood rub

Plate 51.—A Brushed and Smoothed Texture Produced with Plastic Paint.

Plate 52.—A Very Rugged Texture Produced with Plastic Paint Manipulated with a Brush.

down the high projecting points just enough to smooth them off a little.

Plate 53 shows the refinished wall and staircase of an average home. The wood staircase was dark golden oak before being refinished. The old varnish, stain and filler were stripped off; the wood was bleached, stained gray, shellaced and filled with white filler. The final finish was very light colored varnish on the stair treads and wax on the balance of the wood.

The walls are smooth plaster from which the old wall paper was stripped. After repairs to cracks and holes a coat of plastic Swedish putty material was brushed on, stippled with a brush and worked up as rough as possible with an old short flat wall brush. Then it was allowed to dry thoroughly.

A second coat of plastic putty was next brushed on thick and a plasterer's trowel was used to produce the rough texture indicated in Plate 54. When the coating was quite sticky, after being on the wall a few minutes, the trowel was pressed into the coating and pulled straight out again, thus drawing the material to the sharp rough points noted.

This wall was glaze-coated in brown over the cream colored rough coat.

Combed Texture Finishes.—Plates 55, 56 and 57. These textures have rather a novel appeal and also serve to apparently increase the height of a ceiling. It is rather too rugged for small rooms but is very attractive for large rooms, especially where a new and radically different treatment is wanted.

The plastic wall finishing material is brushed on as usual with a flat wall or calcimine brush. When the material has set a wire brush, large comb or whiskbroom is dragged through as nearly verticle as possible to line up with the corners of the room. That is all there is to doing this texture, except coloring the plastic ground coat and glazing on top of it or not as preferred.

Plates 55 and 56 show finishes done with a wire cleaning brush. Plate 57 shows a similar finish done with a whiskbroom.

Brushed Rough Wall Textures.—Plates 58 and 59. These are the most simple of rough wall textures done with plastic materials. The material is brushed on with the flat wall or calcimine brush and allowed to set a few minutes. Then the texture is brushed in.

Plate 58 was simply stippled evenly all over with a stippling brush. Note Chapter VI for the stippling method.

Plate 59 shows a texture produced in the same way except that a whiskbroom was used with short strokes in all directions as indicated in the picture.

Sponge-Stippled Rough Textures.—Plate 60. This very rough texture looks like embossed leather when the ground rough coat is colored ivory and a glaze stain of dark Vandyke brown is used to finish. Sometimes also the surface is coated with gold or copper bronze before the brown glaze is brushed on. That makes a novel and interesting finish for panel centers, dados and other limited areas.

This texture is produced by brushing on a thick, smooth coat of plastic wall material with a flat wall or calcimine brush. When the coating has set a few minutes it is stippled with a large sea wool sponge. The sponge should be soaked in water to fluff it up before using.

Finger Rough Textures.—Plates 61 and 62. Whenever a call comes for a novelty or bizarre wall treatment the texture pictured by Plate 61 should be seriously considered. It is not suited to large surfaces as the stippling proceeds slowly.

This texture, and that in Plate 62, is started by brushing on a heavy coat of plastic material, using a flat wall brush or a calcimine brush. When the material has set a little the texture in Plate 61 is produced by

Plate 53.—An Exceedingly Rough Texture Produced with a Plastic Paint on a Smooth Plaster Wall.

Plate 54.—A Close-Up View of the Rough Texture Shown in Plate 53.

Plate 55.—A Vertical Line Rough Texture Produced with Plastic Paint and a Steel Wire Brush.

making prints of the index finger in the surface as indicated.

The texture of Plate 62 was also produced by using all the fingers of one hand in a circular manner as indicated.

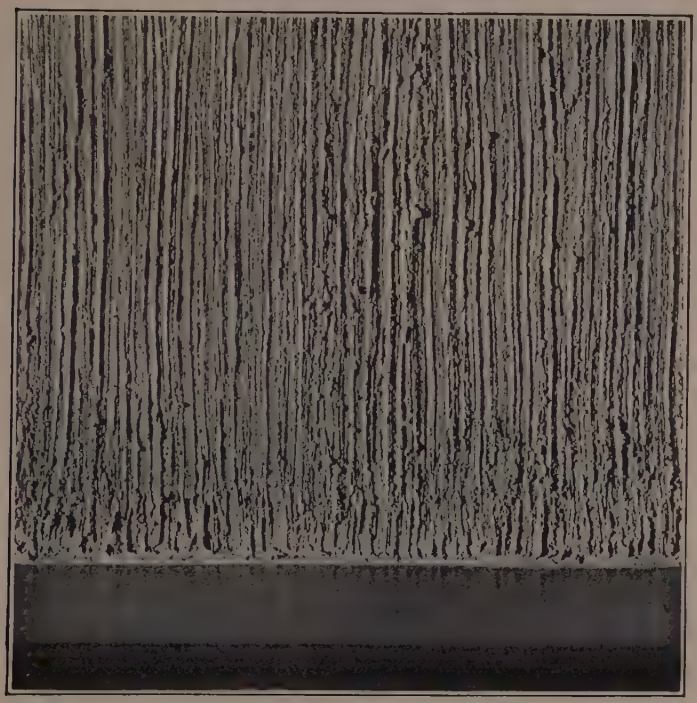


Plate 56.—A Close-Up View of the Texture Shown on Plate 55.

Plate 61 makes a strikingly beautiful effect when used for panel centers and when coated with aluminum bronze. Over top of the bronze a glaze coat of peacock blue may be brushed and stippled with a wad of cheese cloth.

Plate 57.—A Rough Vertical Texture Produced with Plastic Paint Using a Whiskbroom.

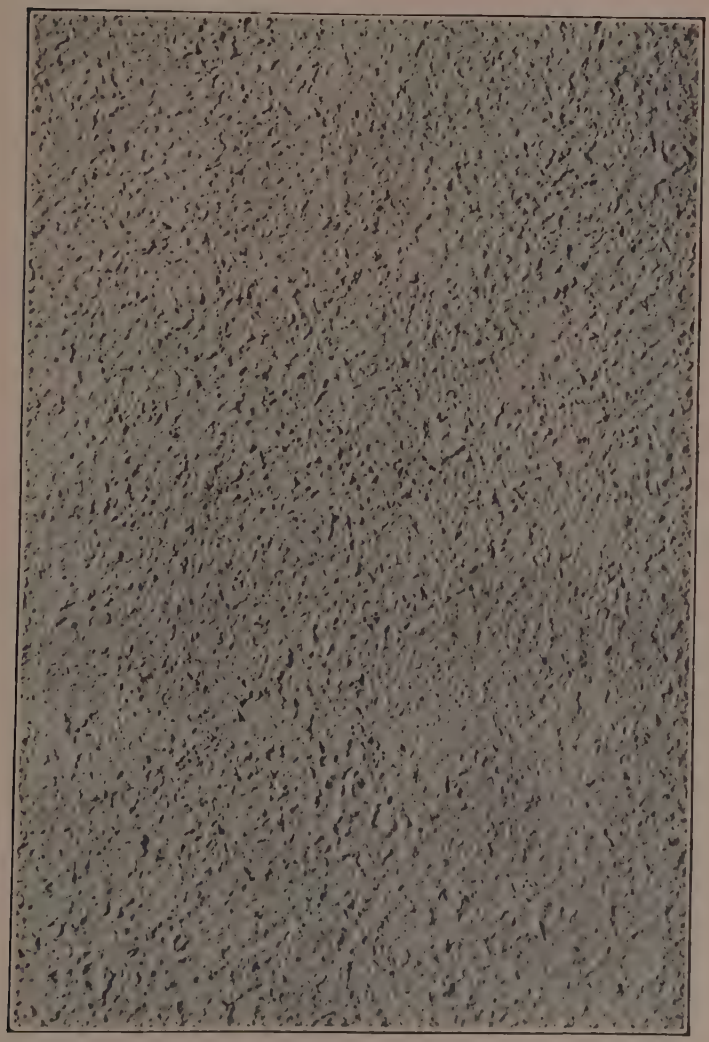


Plate 58.—A Conventional Rough Stipple Texture Produced with Plastic Paint and an Ordinary Stippling Brush.

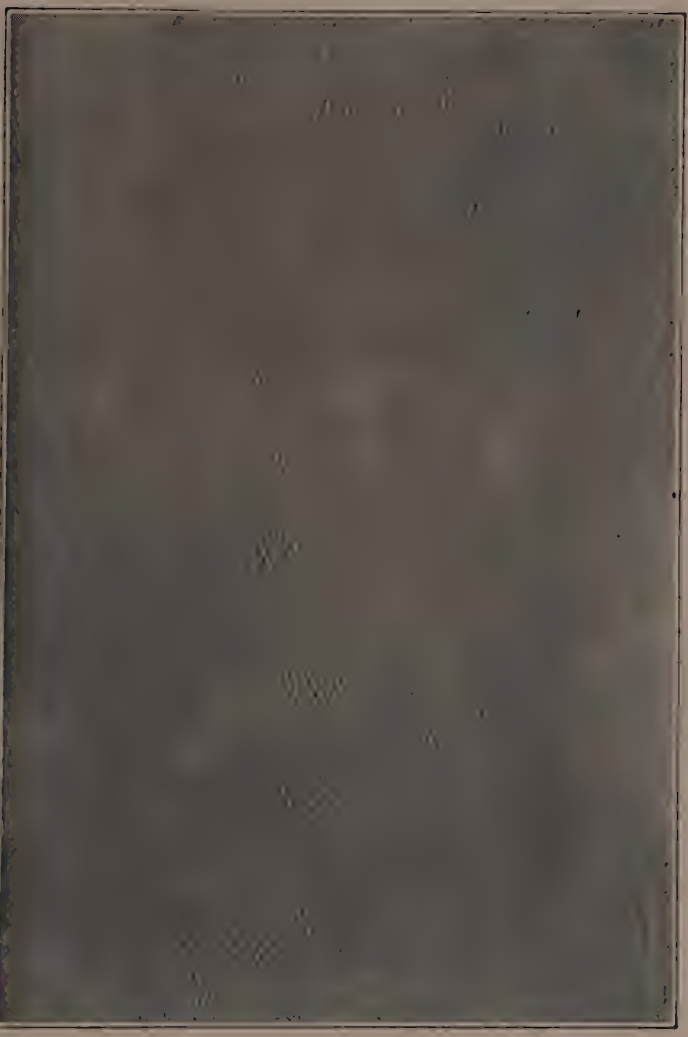


Plate 59.—A Rough Texture Representing the Gothic Period Produced with Plastic Paint. Texture Worked In with a Whiskbroom.

Plate 60.—An Interesting Texture Produced by Stippling a Rough Coat of Plastic Paint with an Ordinary Sponge.

Plate 61.—A Novelty Texture Produced by Making Finger Prints in a Heavy Coat of Plastic Paint.

Plate 62.—An Exceptionally Beautiful Rough Texture Produced by Manipulating a Very Heavy Coat of Plastic Paint with the Fingers.

CHAPTER XVI

LACE STENCIL WALL FINISHES

At several periods in the history of decoration stenciled wall patterns have enjoyed considerable popularity. The cycle of popular interest undoubtedly is again sweeping on from severely plain painted surfaces to those which are more colorful and which show artistic textures and patterns.

And it is quite likely that stenciled wall decorations may be much more employed during the next few years. There never has been a period, of course, when stencils have not been employed to some extent both as frieze bands, spot designs and for all-over patterns to completely cover the wall surfaces of a room. During the last few years stencil decoration employing diaper stencils for all-over patterns have been rather strictly limited to theaters and other large public buildings, along with some of the higher-priced residences.

In the hands of decorators of good taste and discrimination stencils are capable of producing distinctive, artistic and unusual decorative effects.

The decorators' craft today is indebted to S. T. Ballinger, a master painter, and The New Jersey Zinc Co., for whom he developed an improvement in stenciling certain conventional and tapestry designs on walls. Mr. Ballinger has perfected a method which employs lace curtain materials as stencils for producing very effective and artistic wall decorations.

By the use of lace curtain material for stencils it is possible to transfer more delicate and intricate conventional designs than are commonly used with paper stencils, except those produced by Japanese decorators. And the lace stencils can be made in much larger sizes. A lace stencil is more durable, naturally, than a paper one.

The limitations of this method are those of variety of designs. In paper stencil designs of a great many kinds are adapted, while in this new method the decorator is limited to such designs as are found in lace; conventional classic and tapestry motifs. These are numerous, however, in detailed differences, although all are confined to two or three types of design.

THE WORKING METHOD

Tools.—Lace curtain materials can be purchased by the yard. The laces and nets come in rolls of many yards and in varying widths from 30 to 40 inches. Some such laces are expensive, but it is not necessary to use high priced materials; the market affords almost unlimited patterns of conventional and classic tapestry patterns in inexpensive lace curtain materials. Prices range from 20c per yard to two and three times that much.

Other tools needed are a stencil brush which may be of the regular type, or a round or oval pound brush of such a kind as has long been used for painting large surfaces. A plumb bob and line and some glass push pins together with mixing pots for color complete the list of tools needed.

Selection of Designs.—Choosing laces for stencils according to character of designs wanted is largely a matter of personal preference, yet some patterns are much better than others for use as stencils. In Plates 63,

63A, 64, 64A and 65 are shown several suitable lace patterns which give an idea of what should be used.

Making the Stencil.—The size of the stencil will vary, depending upon the size of the lace design and how much of the design should be included in the stencil. Where the pattern breaks conveniently ought to be con-

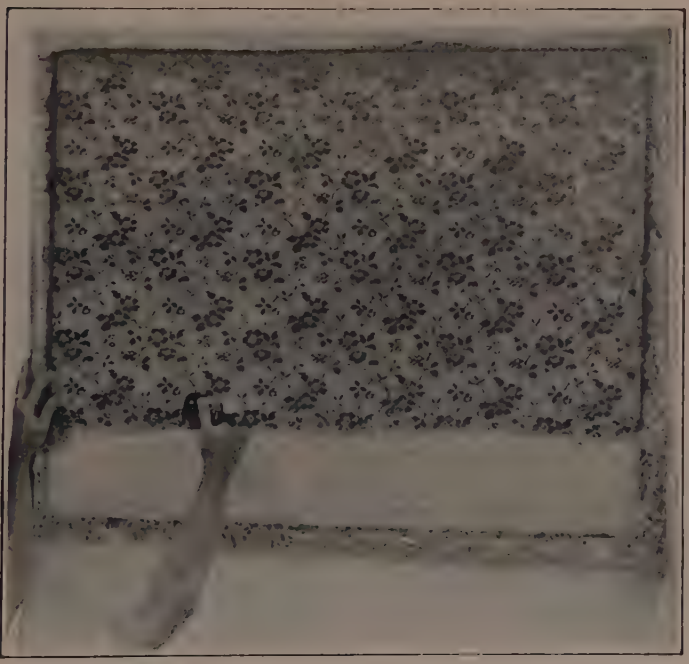


Plate 63.—A Lace-Curtain Stencil Stretched on a Wood Frame and Being Coated with Shellac.

sidered also in cutting the lace and deciding on the size of the stencil. Also the size of the wall, panel or frieze to be decorated has a bearing, not only on the size of the stencil made, but on the size of the design or motif selected.

The first step in making the stencil after selecting the

lace design is to make a wood frame upon which to tack the lace for stretching before giving it a coat of shellac. Ordinary carpet tacks may be used for this, or the glass push pins sold by art stores for use in hanging pictures on a wall are much more convenient to work with.

The frame upon which to tack the stencil may be made from what the lumber yards call screen stock—$1\frac{1}{8}$ x 2 inches for fly screens. This is straight and light weight. Make the frame a little larger than the stencil design, of course, an inch or two is enough. Simply butt the corners of the lumber and nail with ten penny finishing nails. The frame may be as long as the stencil as a rule, but some stencils may be so long that it is best to use them without the frame in transferring. Then when shellacing a frame half, one-third or one-fourth as long may be used; planning to shellac the stencil in two, three or four operations, one part at a time.

Having the frame made, to fasten the stencil to it is the next operation. Tack down all four edges of the lace; or better yet, secure them with glass push pins. The lace should be fastened to the frame first and cut off around the outside edges later. The design ought to come well inside of the wood frame. The lace should be stretched so that the design is not distorted; that is, the pattern ought to run square and parallel with the frame and the frame should be square. Obviously no sags or wrinkles must be permitted in the lace.

The next step is to brush on one heavy coat of orange shellac to each side of the lace. Be very careful to brush the shellac so that no holes in the lace are filled or bridged over with shellac. This is very important to assure the transfer of a continuous and complete pattern with the stencil. When the shellac is dry and hard the stencil is ready for use. The shellac makes

Plate 63A.—A Lace-Curtain Stencil Transferred in a Moderately Dark Color onto a Light-Colored Ground Coat.

Plate 64.—Showing the Method of Using a Stippling Brush or a Round Pound Brush for Transferring a Lace Stencil to a Wall in Color.

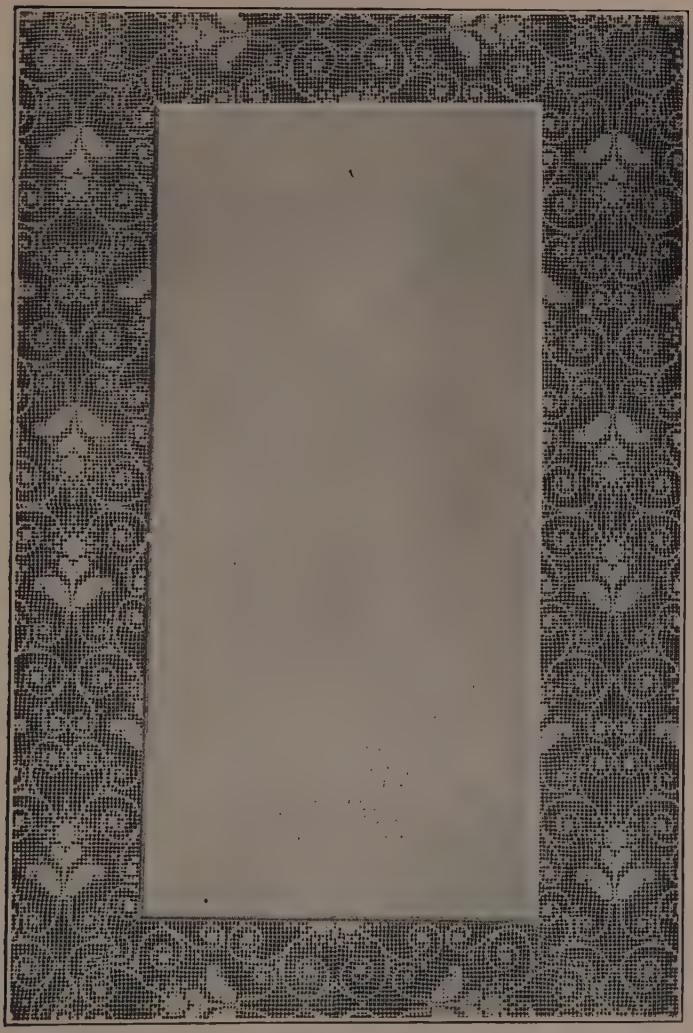


Plate 64A.—Another Lace-Curtain Stencil Design Suitable for Wall Panels.

the design sufficiently rigid and holds it in shape, yet the stencil as a whole is flexible and can be rolled up on a broom stick. The shellac also protects the lace from injury.

Plate 65.—Large Lace-Curtain Stencils May Be Rolled While Being Transferred to the Wall.

The stencil when completed may be used while fastened to the frame, or it may be removed from the frame. After the edges are all trimmed neatly and square it may be fastened to the wall with push pins while the design is being transferred to the wall. When the stencil is used off the frame it may be rolled up on a broom stick or window shade roller for convenience in handling and for protection when not in use.

The ability to use the stencil unattached to the frame is a great convenience, since it permits the decorator to work the pattern up close into corners, next to mouldings and on irregular surfaces.

Preparatory and Ground Colors.—Lace stencils because of their intricate and delicate designs are most useful on smooth plaster walls and on other smooth surfaces. The patterns of some of the bolder designs may be transferred to rough sand finished walls.

The wall to be decorated with stencil pattern should be built up the same as any painted wall. All preparatory work on cracks and holes must be done as described in Chapter IV.

On new walls two coats of paint with a size coat between are essential for best results. Old painted walls in light colors may be made ready for stencil treatment with one coat of paint.

The ground color may be any color wanted. It may be very light for transferring a stencil pattern in darker colors; or it may be dark for transferring a stencil pattern in light colors.

The ground color may be mixed to dry flat for gloss stencil color or flat stencil color. Also the ground color may be gloss paint or gloss enamel upon which the stencil is transferred in flat color, thus producing a silk effect because the light reflects on the ground coat.

All flat and semi-flat ground colors ought to be stippled as described in Chapter VI.

Pure white, ivory white, cream, light blue, gray, pink and green are ground colors commonly used.

Stencil Colors.—The color to use for transferring the stencil to the surface may be opaque, one which hides the surface like any paint, or transparent like glazing colors.

The stencil color may be mixed to dry flat on a flat ground or it may be flat to go on a gloss ground, but never gloss for a gloss ground.

Bronze powders mixed with the usual bronzing liquids may be used for the stencil color on flat paint grounds.

Opaque colors may be any flat or gloss paint mixed rather thick.

Transparent colors are those used for glazing, such as Prussian, cobalt and ultramarine blues, chrome green, raw and burnt sienna, raw and burnt umber and all the colors listed as glaze colors in Chapter X.

Such glaze colors are to be thinned with turpentine only for stencil use as flat color and with one-fourth turpentine and three-fourths linseed oil or interior varnish for gloss stencil color. The color should not be mixed too thin—a little stouter than ordinary brushing consistency is correct.

Transferring the Stencil.—The first step is to measure out your surface to see that the stencil is going to begin and end to look well from the standpoint of completeness of the stencil pattern. This can usually be manipulated by dividing the total run of surface in inches by the length of the stencil in inches.

Having determined where to start the stencil the next step is to mark guide lines on the wall to be sure the stencil can be made to run straight and parallel to the floor or picture moulding in the case of frieze band and other band stencils; or that the stencil will be run vertical and plumb with the corners, door and window casings.

A chalk-line stretched in a horizontal position will give you the guide lines to be marked with chalk or a pencil.

A plumb bob and line will enable you to run the vertical lines true. But check your corners carefully. They are supposed to be plumb, but they are not always so. You may have to gain or give a little off the plumb line to make your stencil vertical lines look well with the corners.

For marking off panels a six foot straight-edge described in Chapter XVIII is useful.

With all guide lines marked the stencil may be securely fastened in place with push pins or ordinary pins.

Now assuming that the stencil color has been mixed, dip the stencil brush into it about half an inch only. Wipe out the color from the brush as much as possible. This is very important. None but a comparatively dry brush will transfer the stencil color so as to avoid blots and runs. Some decorators never dip the brush into the color, but rather run the color on to a flat board with another brush and then pick up color on the stencil brush from the board.

To transfer the stencil pound it with the brush, using the brush like a hammer at first. With a little experience you can use the brush in a semicircular manner and make faster progress, but that may get a new hand into trouble with too much color and runs of color if he doesn't take care.

If the stencil used doesn't reach from corner to corner of the wall, or from picture mould to baseboard on vertical stretches, it will have to be lifted one or more times to continue the design. Then great care must be taken not alone to keep the second setting of the stencil on a straight line but also to make each setting join up perfectly with the previous pattern transferred to the wall.

A stencil may be transferred in only one color, or several glaze colors may be used in the same manner as to stippling as was described in Chapter X; that is, by blending two or more colors together. The colors are first put on with a stencil brush for each color, and when all colors are on, a wall stippling brush is used to blend the colors together.

CHAPTER XVII

SPRAY GUN DECORATIVE FINISHES

The working methods essential to the production of Tiffany blending, mottling and glazing were given in Chapter X. As described there these finishes are accomplished by hand stipple methods. Similar blends and mottles can be done with the spray gun, and done much more rapidly on smooth or rough surfaces using the same glaze color. Notes Plates 13, 13E and 16 in Chapter X. Opaque colors also may be used in the spray gun to produce mottles and blends.

And in Chapter XV a number of rough textures produced on smooth and rough walls with plastic paint compositions were described. Some of these artistic rough textures can be reproduced with spray guns using exactly the same plastic paint compositions. Furthermore, a great variety of other textures can be produced with spray guns.

Such rough textures done with spray guns range all the way from simple formal grain stipples, such as are produced with a stippling brush, to very rugged coarse textures suitable for large rooms. One of the remarkable facts about decorative finishes done with a spray gun is that they are done many times faster than hand work. Much time and labor cost are thus saved.

Spray gun textures of many other types may be produced. Beautiful spatter finishes similar to those described in Chapter XIII are produced with a spray

gun in one or several colors in a remarkably short time using the same paints and colors as are employed in hand brush spatter work. Plates 28 and 29, Chapter XIII, illustrate interesting spatter finishes.

Still another type of spray gun decorative finishes may be called novelty treatments. They are useful

Plate 66.—The DeVilbiss Spray Gun Showing Round and Fan-Shaped Sprays of Material.

principally for window display back grounds, theater stage scenery, display cards, picture mat boards, panel center decorations on walls, walls of sales rooms, convention booths, retail shops, cafe and restaurant walls,

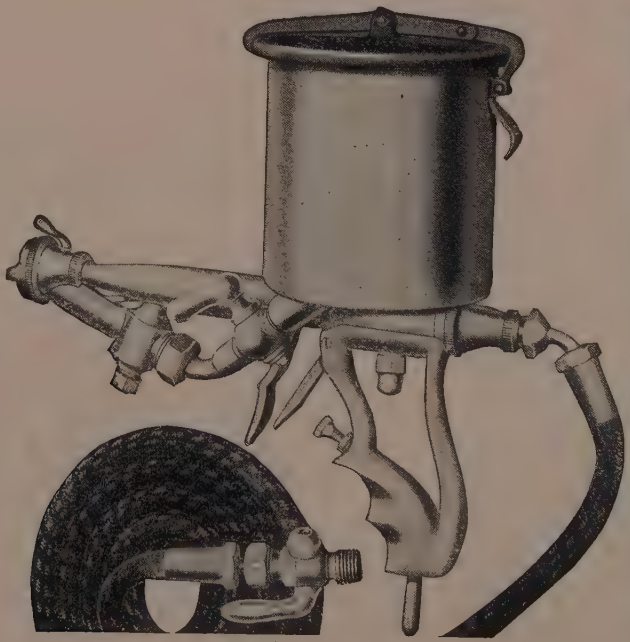
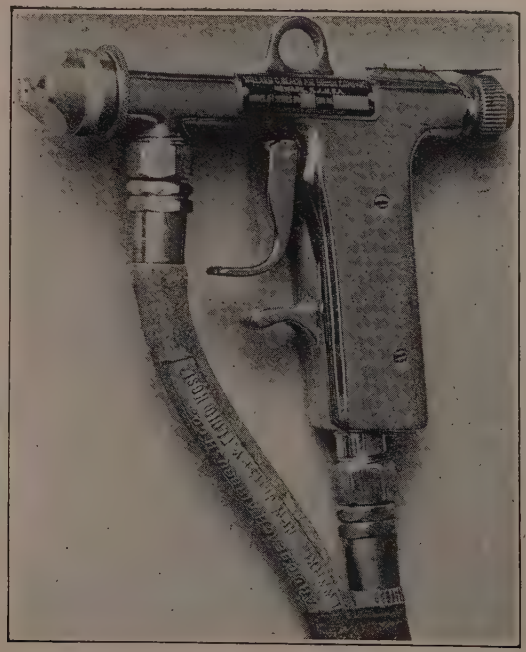


Plate 67.—The Paasche Air Brush N. F. 3 (Left).



The Willard C. Beach Air Brush A-1.

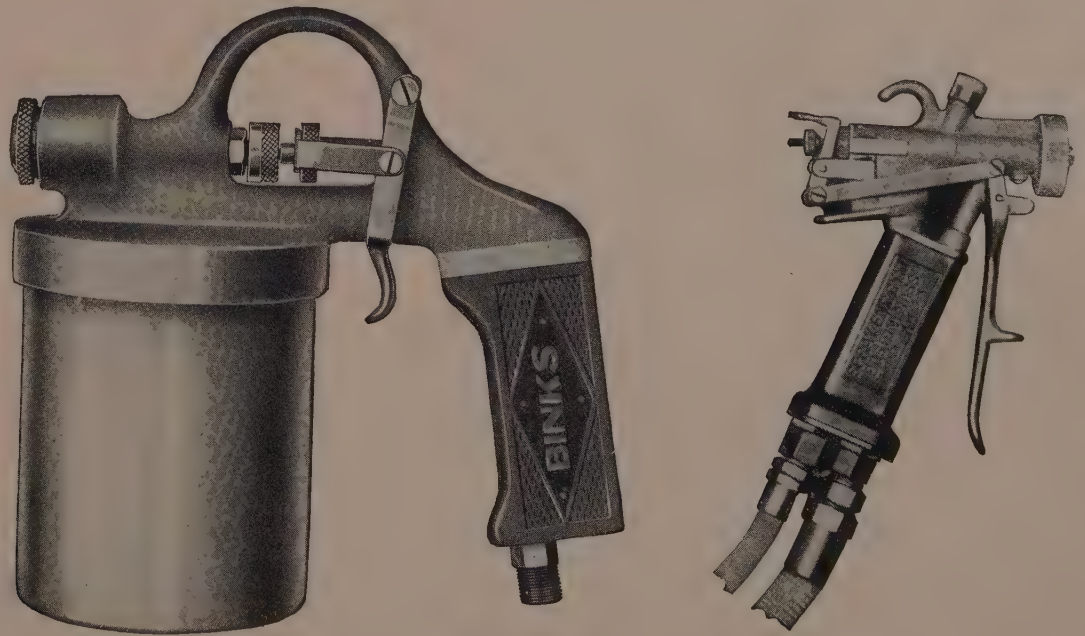


Plate 67A.—The Binks Spray Gun No. 105 (Left). The Spray Engineering Company Gun No. P-6 (Right).

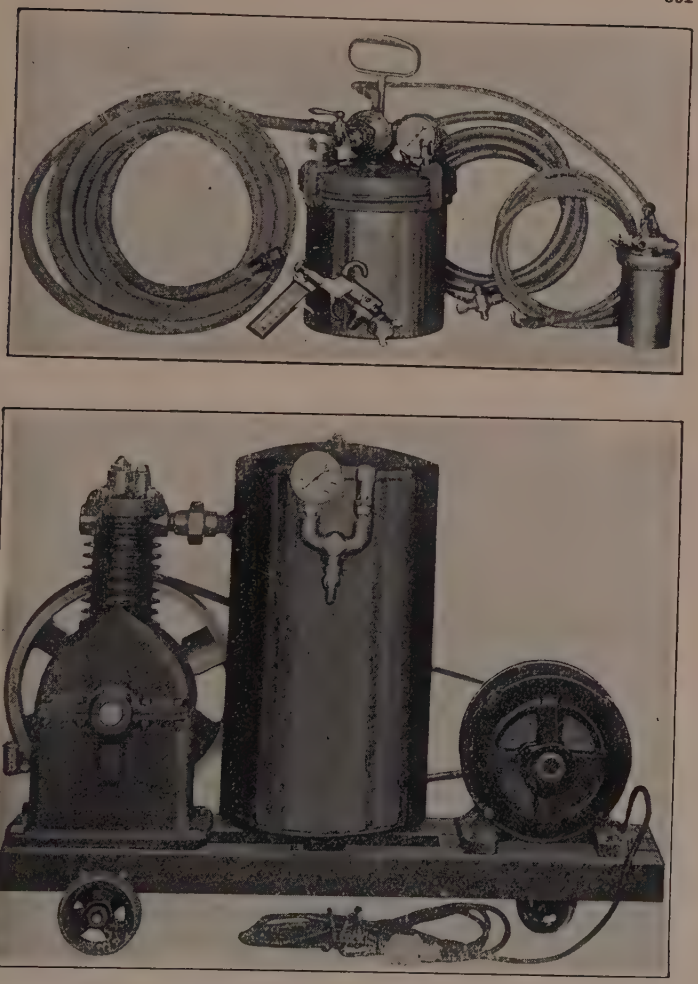


Plate 67B.—A Complete Spray Gun Outfit Suitable for Plain and Decorative Wall Finishing, Furniture Finishing, Enameling and Automobile Painting. The Equipment Includes on the Truck, the Air Compressor, the Air Storage Tank, the Electric Motor. Above Are Shown the Material Tank, Pressure Regulator, Material Hose and Airline Hose, the Spray Gun, and to the Right, a One-Quart Size Material Tank Which Can Be Attached to the Gun When Small Amounts of Color Are Used and Frequent Changes of Color Are Made.

tea rooms and many similar surfaces which need a novelty or bizarre treatment more striking than the formal and informal decorative treatments preferred for homes and dignified public buildings.

Such novelty treatments are similar to those pictured in Plates 68, 69, 70 and 75 sprayed on with a Binks No. 100 Spray Gun.

Plates 71 and 74, sprayed with the same gun, are of the more restrained, informal type suitable for walls in homes.

Plates 72, 73, 76, 77, 77A, and 77B are finishes sprayed on with a DeVilbiss gun. All are of the conservative character of finishes suitable for walls in homes and public buildings alike.

Plates 77C and 77D are sprayed-on finishes done with the plastic material called Compostipl, described in Chapter XV.

Materials Used.—For producing Tiffany glazed, mottled and blended wall treatments using spray guns the essential materials are the glaze colors described in Chapter X. There is no need, however, to use a glazing liquid. The colors may be thinned with benzine or turpentine and very little oil is needed.

The ground color coats are sprayed or brushed on and mixed to dry flat. The glazing color may be mixed quite thick or thin—different effects result from each mixing. The color is put into the material container of the spray gun and you are ready to apply the color coat. The manufacturers of each kind of spray gun issue instructions for using their tools and these should be carefully followed. The manufacturers will also gladly give you any special instruction or information needed to produce standard painted, enameled, varnished, stained or lacquered finishes, for the use of other materials or the production of novelty finishes.

Materials needed for producing rough textured and stippled decorative wall finishes are those described in

Chapter XV. Other materials used for temporary decorating as on window display backgrounds in retail stores, theater stage scenery, show cards and similar surfaces are these:

—mixtures of cheap glue and water;
—mixtures of glue, water and whiting;
—mixtures of glue, water and dry rosin;
—mixtures of glue, water, rosin and whiting;
—clear lacquers;
—lacquer enamels.

Tools Used.—There are on the market a number of high class spray guns which are capable of producing beautiful decorative wall textures, glazing, mottling and blending of colors. Space is too limited to illustrate all such equipment so only one or two are pictured to give some idea of the type of spray gun used. The author recommends that those who are not familiar with spray gun tools make a careful study of all such equipment on the market before making a selection. Spray guns as a class are vastly improved over their state of development a few years ago and the equipment put out by reliable manufacturers performs with a high degree of efficiency today.

Plates 66 and 67 illustrate the types of spray guns used for wall finishes. The guns having detachable pint and quart metal material cups—or, ordinary glass mason jar material containers are best suited for finishing furniture, automobiles and many items of merchandise to be decorated with paints, enamels, varnishes, lacquers, bronzing materials, stains, fillers, etc., also for wall finishes where a small area of surface is to be coated or where many changes of color occur. The cup type of gun may have a siphon feed of material or pressure feed. Siphon feed is best only where a very fine atomization of material is wanted; it will not draw up more material than it can atomize.

The plastic paint materials used are often mixed nearly as thick as putty to produce very rough textures. This very thick material will flow through the material hose used in connection with large material tanks holding several gallons, but, obviously, more air pressure is needed on the material in the tank than for thin paint or varnish. Such tanks are used with air pressure on the material with spray gun outfits suitable for spraying large plain surfaces with paint, stain, mill whites or calcimine on exterior and interior house painting, the decorating of factory brick and cement walls etc.

This heavy plastic wall paint material will not flow through the gravity material supply tanks used so much in furniture factories and other industrial plants where the spray gun is used for painting, enameling, varnishing, lacquering, filling and staining all manner of merchandise from automobiles to ladies' hats, from sewing machines to caskets.

The spray guns with pressure feed material tanks holding several gallons of material can be efficiently used for decorative wall finishes where materials of any consistency are used, and, indeed, they are essential for finishing surfaces of large area.

The spray gun equipment needed for producing decorative wall textures consists of a spray gun, one or several quart size material cups or larger pressure material tank, air compressor, air storage tank and motor or engine power unit, pressure regulator and sufficient rubber air hose to enable you to reach the walls of a room conveniently.

Some decorators purchase these units mounted on skids on a small automobile truck. That makes transportation easy. Sufficient air hose is needed to reach from the street into all rooms to be decorated.

All manufacturers of spray guns also furnish small trucks with wheels upon which the motor or engine, compressor, air storage tank and oil and water separa-

tor, etc., are mounted. This truck is carried to the job by wheeling it into the truck. It is then unloaded and carried into the building or used outside of the building nearby.

Working Methods.—The methods to pursue for producing decorative wall finishes and the materials used are practically the same for all spray guns. There are, however, some differences to be noted in the adjustment of various guns. For this information the decorator must rely strictly upon the instructions issued by the manufacturer of the particular spray gun he is using.

The various decorative wall textures are produced by using different kinds of plastic materials, by mixing these materials thick for some textures and thin for others, by using a low atomizing pressure for some textures and high pressures for others. The amount of air pressure on the material tank and the height of the gun above the material tank also influence the texture produced. The air pressure on the material may vary from a few ounces to many pounds, depending upon the consistency of the material and how high above the material tank the gun is being used. Then the distance the gun is held from the surface and the manipulation of the trigger on the spray gun also influence the character of the texture produced. A round spray is used for some textures while a flat fan-shape spray produces others. The most important points to remember are that variations in textures are made by (a) changing the atomizing pressure at the nozzle, (b) changing the air pressure in the material tank.

By way of illustration—a thick mixture of material sprayed with a low atomizing pressure of from 25 lbs. to 40 lbs. will spray the material out in gobs or clods, forming texture similar to Plates 69 and 70. A high pressure—from 50 lbs. to 65 lbs., will spray the same thick mixture and a thinner one to produce a finer texture similar to Plates 71 and 73.

Plate 68.—A Beautiful Decorative Finish Produced with a Spray Gun.

Plate 69.—A Novelty Wall Finish Produced with Lacquer Enamel Put on with a Spray Gun.

Plate 68. This finish was sprayed on using glue and water to produce the rough texture. Then dry aluminum bronze was sprayed on and the composition plaster cast border was glued in place. The flowers on the border were then touched up with a little dull red and blue-green glaze color; then a thin flat black was sprayed on and the highlights were wiped out with a cloth, leaving the black only in the deep depressions. This finish can be produced better for wall surfaces with plastic paint compositions.

Plate 69. A dull red flat ground color coat was sprayed on to this surface. Then the material container of the spray gun was filled with an ivory colored lacquer enamel. The lacquer was sprayed with a low pressure, giving the interesting pattern noted in this picture. A novel and servicable finish suitable for some special purposes.

Plate 70. A novelty finish of rare beauty. Suitable, of course, only for limited areas of wall such as in panel centers, dados or for some special surface as on window trim backgrounds for retail stores.

The material used in producing this pattern with the spray gun set at a low pressure for atomizing was glue, water and dry rosin melted into the glue while hot. A somewhat similar treatment can be produced with plastic paint compositions but the material cannot be drawn out to such fine cobweb lines. The plastic paint compositions are more durable and more practical for use on walls. Walls given a heavy coat of glue in clods of this character in a humid climate would no doubt release an unpleasant odor, also any room not constantly well ventilated would suffer from such a glue treatment. This finish produced with glue and rosin, however, is suitable for temporary decorations, such as stage settings, display cards, window trim backgrounds, etc. The color scheme on this finish is a gold bronze ground

with clouds of Vandyke brown, dull red and green blending in.

Plate 71. In this we have a beautiful artistic stipple finish which cannot be produced in any other manner than with a spray gun. The picture doesn't begin to do justice to this finish because it doesn't convey to you the marvelous play of light and shadow and the color of the texture nor the unusual and delicate lace pattern effect of the under-surface.

This finish was produced with plastic paint composition such as is described in Chapter XV. The material was mixed only fairly thick; it was sprayed on and when a rather rolling, smoothly rugged texture was gained the material supply was cut off and only compressed air was blown on to the wet paint. The air formed the delicate lace pattern in the under-surface which holds great charm for the eye of artistic appreciation. The paint is cream color only on a flat ground color of dull chocolate brown, but the effect is of many shades and tints of that color.

Plate 72. An interesting texture. The material was sprayed on sparingly and did not completely cover the ground color. The material used was the thick pigment from the bottom of a can of flat wall paint. A low pressure was used which did not atomize the material.

After the thick texture coat was dry it was given a thin glaze stain coat and allowed to dry. Then the surface was lightly rubbed over with fine sandpaper to cut off the high and sharp projections.

Plate 73. A fine-grained stipple finish which is suitable for use on nearly any wall surface and for ceilings, especially. Quite similar to stippling done with a regular stippling brush on plastic paints and yet the spray texture has an alluring character all its own.

The material used was the thick pigment from flat wall paint—a light color on a ground color of a little

Plate 70.—An Unusually Beautiful Novelty Texture Suitable for Wall Panels, Put on with a Spray Gun.

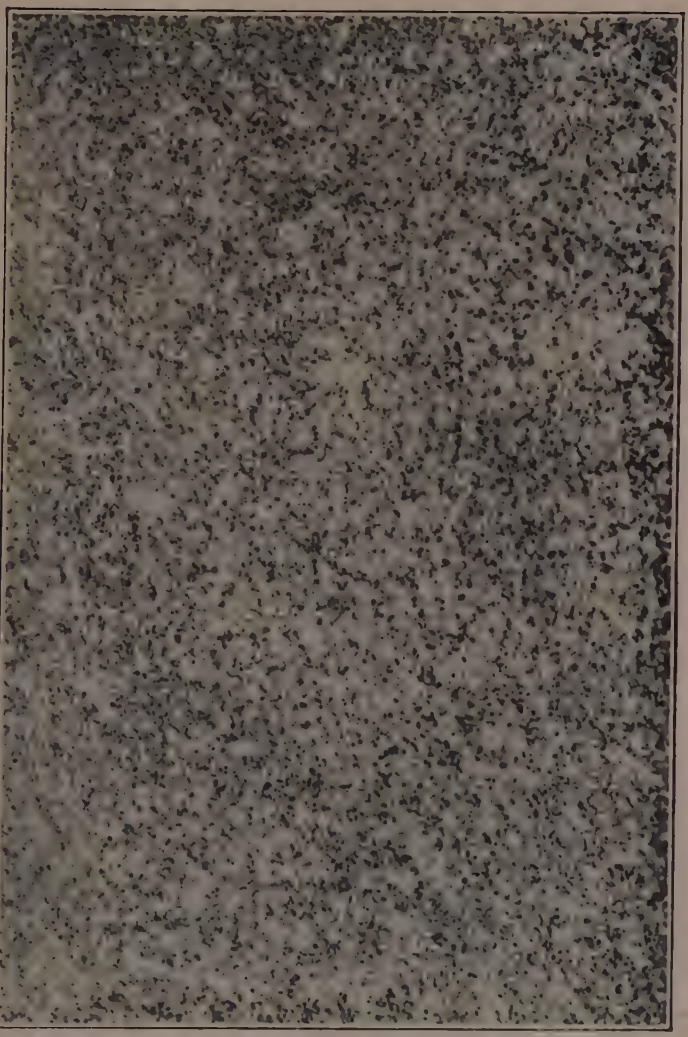


Plate 71.—An Interesting Wall Finish Produced with a Spray Gun and Plastic Paint.

Plate 72.—A Rough Texture Put on with a Spray Gun, Using Thick Flat Wall Paint.

Plate 73.—A Very Fine-Grained Stipple Texture Put on with a Spray Gun.

Plate 74.—An Unusual Rough Texture Done In Brown, Green and Gold. The Plastic Paint Was Sprayed On.

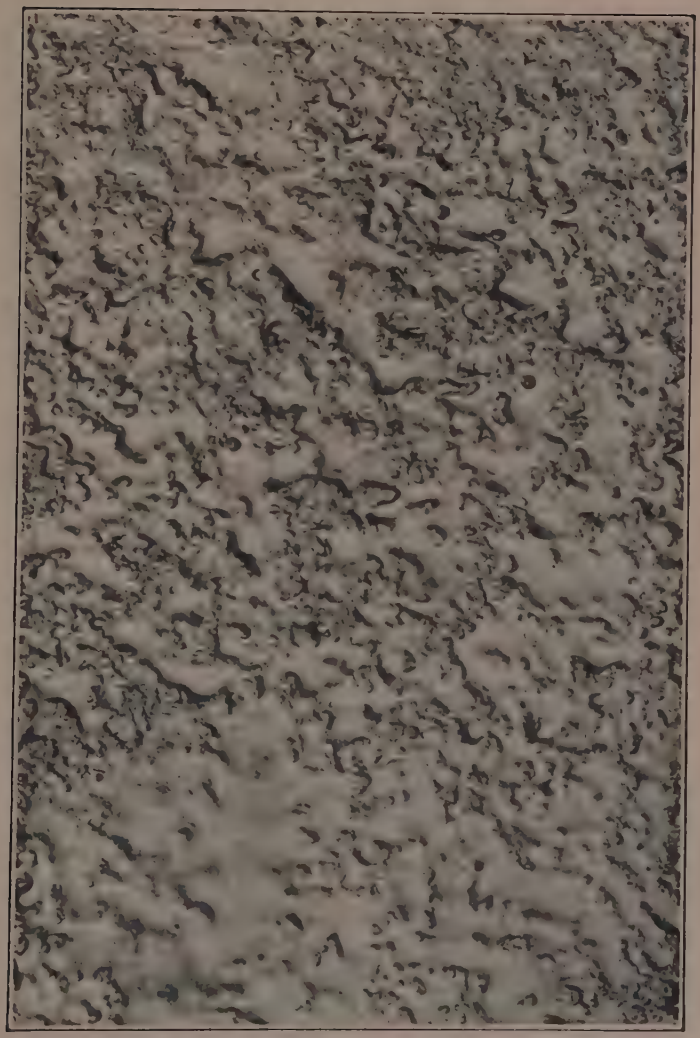


Plate 75.—A Rather Massive and Rugged Texture Produced with Plastic Paint Put on with a Spray Gun.

Plate 76.—A Reproduction of the Stucco Finish Commonly Done with Portland Cement. Produced with Thick Flat Wall Paint Put on with a Spray Gun.

darker hue. A fairly high atomizing pressure was needed to gain this texture.

Plate 74. An exceedingly rough texture suggestive of a rustic autumn leaf background.

The material used for the texture was glue and water only with a low pressure at the spray gun nozzle. When the rough texture was dry a coat of copper bronze was sprayed on and then here and there a cloud of dull green was blended in with the spray gun.

Plate 75. This texture was produced in the same manner as that pictured in Plate 74 except that a finely ground plastic paint texture was used and the material was piled on a little more and allowed to smooth out in patches.

Plate 76. A rugged texture very much like exterior portland cement stucco texture. Flat wall paint thick pigment was used. The pressure at the nozzle of the spray gun was high enough to completely atomize the material. The paint was piled up to completely cover and hide the surface below.

Plate 77. A useful and very attractive texture similar to that pictured in Plate 72. Produced in exactly the same way but the surface was not sandpapered when dry. Material was sprayed on sparingly and doesn't completely cover the ground color.

The texture coat is lighter in color than the ground coat. The material used was thick pigment from flat wall paint.

Plate 77A. A beautiful textile wall finish produced with ordinary flat paint mixtures. The ground color was light and flat. Darker colors were spattered on with a spray gun and while still wet a dry badger blender brush or calcimine brush was dragged through the paint from side to side and from top to bottom.

A low atomizing pressure was used to cause the spray gun to spatter the dark colors; in other words, the dark colors were not atomized at the nozzle.

Plate 77B. The same kind of finish as is pictured by Plate 77A. Produced by the same method except that the badger blender brush was drawn over the wet paint spatters only one way—from top to bottom.

Plate 77C. This pictures a very tough and durable wall finish put on with a spray gun using a plastic paint called Compostipl. (See Chapter XV for description.) This material can be had in any color.

The finish from which this plate was made was produced with a cream colored texture coat. Then dry aluminum bronze was sprayed on. After the bronze was dry a thin coat of black ground in Japan and thinned with turpentine was sprayed on. While wet the surface was wiped over with a cloth to remove the black from the high spots and allow the aluminum coat to show through.

Plate 77D. A rough-texture wall finish of uncommon beauty. Produced with a spray gun using a plastic paint called Compostipl. (See Chapter XV for description.)

The rough texture coat is cream color. The pressure at the gun nozzle was not enough to atomize the paint. The surface was only partly covered. When dry a coat of thin white shellac was sprayed on so the last color would wipe off clean and easy. Then when the shellac was dry a thin coat of Vandyke brown Japan color thinned with turpentine or benzine was sprayed on. To finish the surface it was wiped over with a cloth to remove the dark brown from the high spots.

Plate 77.—A Rough Texture with an Interesting Pattern Made by Spraying on Flat Wall Paint.

Plate 77A.—An Interesting Fabric Texture Produced by Spraying Color onto a Smooth Surface and Blending It Out with a Brush.

Plate 77B.—A Finish Similar to 77A Except That the Color Was Blended One Way, Instead of Both Ways.

Plate 77C.—A Spray Gun Finish Produced with Plastic Paint. A Rather Conventional Texture Useful for Panel Centers and Wall Surfaces Below Chair Rails and Plate Rails.

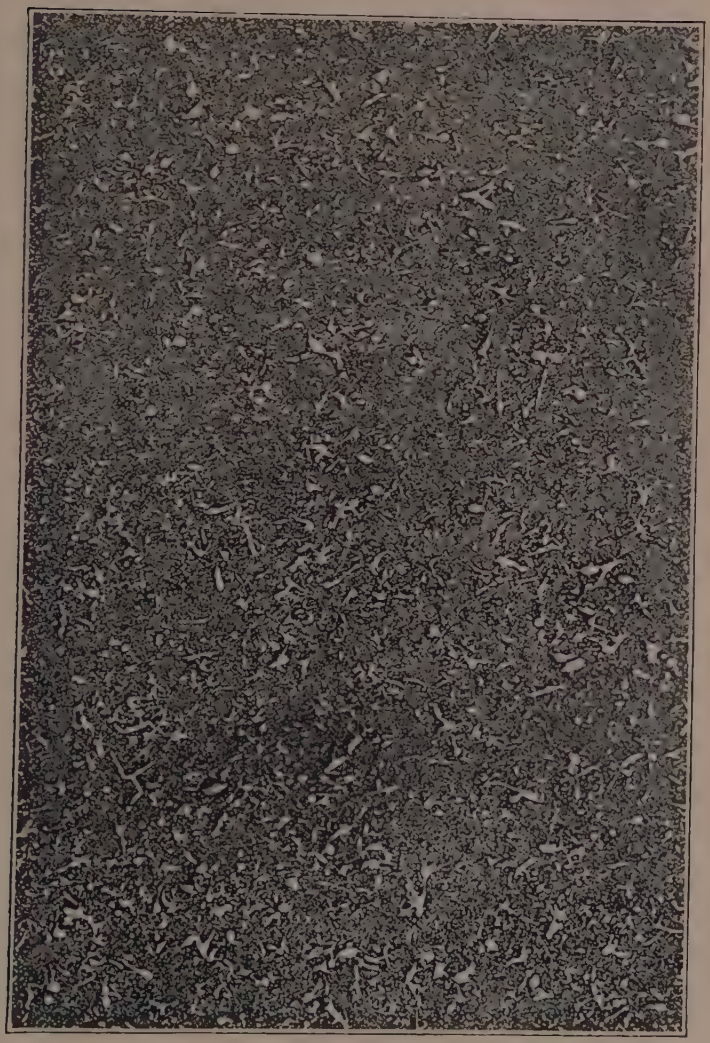


Plate 77D.—A Finish Similar to That Shown on Plate 77C but with a Finer Texture.

CHAPTER XVIII

HANGING AND PAINTING WALL FABRICS

The covering of smooth plaster walls with such fabrics as canvas, muslin and burlap is a practice of long standing, especially when the walls are to be given expensive decorative treatments. Fabrics can also be used on wall board walls, but not on rough plaster, obviously.

Smooth plaster walls are bound to show settlement cracks and also more or less cracks and holes from furniture bruises, etc. After a wall has been patched in several such places and, indeed, if patched by any but the most careful and skillful workmen, it is quite impossible to do a good job of decorating on it, at least a job which will not reveal the cracks and holes in unsightly ridges or depressions. Some walls also show a tendency to chip off because the plaster was not properly mixed.

The most satisfactory treatments for such walls are two. They may be covered with a fabric which may be painted and decorated or stained. Or the walls may be given one of the rough texture treatments without covering with a fabric—such treatments as are described in Chapters XI and XV.

Preparatory Work.—All holes and cracks should be as carefully filled as if the walls were not going to be covered with a fabric. Ridges, high and rough spots

should be sandpapered down level and smooth, or they may show through the fabric. Chapter IV presents the working methods essential to these operations.

Walls covered with calcimine should be washed to remove all of this old material. Likewise walls covered with wall paper ought to be scraped to remove all paper before the fabric is put in place.

A painted wall having a gloss finish ought to be washed with warm water containing a little sal soda to cut the gloss and remove any greasy smoke accumulations. Otherwise the fabric may fail to stick to the wall and bag in places.

When a wall has been coated with gloss oil size, suction or sealing varnish before calcimining no wall fabric will adhere to the surface very long unless a coat of flat drying paint is first put on. When the flat paint is dry a coat of sugar size should next be spread before the fabric is pasted in place. See Chapter V for information about sugar size.

Fabrics are often put on to new walls immediately they are dry, but there is no doubt that it is better to wait until after the first winter to apply the fabric. Every building settles some and the heat of the boiler or furnace promotes cracking of plaster in the corners to some extent. If, however, the corners were covered with wire cloth before plastering there is likely to be little or no trouble from the wrinkling or bagging of the fabric.

Ground Coats and Size.—New and old walls, especially when the plaster is quite soft, ought really to be given a coat of paint mixed to dry flat and a coat of glue size as per Chapter V to assure the stopping of suction and a first class, permanent job. It is true, however, that some decorators put on only the glue size and some no preliminary coating at all.

Paste Mixing.—There are some excellent prepared pastes on the market for use in attaching fabrics to the

walls. They are convenient and in some instances most economical to use.

When the decorator wishes to mix paste for this purpose the below formula will prove reliable:

2 quarts warm water (not hot)
Wheat or rye flour, enough to make a thick paste
1 tablespoonful of powdered alum

Add the dry flour to the water and stir; add the alum and stir; put on the fire and add enough boiling water, a little at a time, to make a stiff paste. Put in no more water. Beat up the paste thoroughly to make certain that there are no lumps left in it. Stir until the paste has thoroughly boiled a few minutes.

Next, dissolve one pound of high quality glue in two quarts of warm water. It is well to let the glue soak in the water for a while, over night if possible. Mix the dissolved glue into the paste well and strain the paste through fly screen or a paint strainer to remove any lumps.

Two tablespoonfuls of Venice turpentine and a little brown sugar or molasses are added to the paste by some decorators who believe that these ingredients increase the adhesiveness of the paste. These are not necessary as a rule, unless difficulty has been experienced in making a fabric stick to the wall.

A careful decorator will test the adhesiveness of his paste on each wall to be covered. A small piece of the fabric a square foot or so is pasted on to the wall while preliminary work is being done. When it is dry the fabric is ripped off to see how firmly it was attached.

Fabric Materials Used.—The wall fabrics used commonly are those under private brand names and those under common trade class names. The latter are these, which come in rolls fifty yards long:

Dyed or Colored Burlaps, 36 inches wide
Interwoven Fabrics, plain and patterns, 30 inches wide
No. 2 Filled Burlap, 36 inches wide

Prepared Burlaps, 36 inches wide
Sanitary Oil Painted Burlap, 36 inches wide
No. 12 Prepared Sheeting, 30 yard rolls, 82 inches wide
No. 12 Prepared Sheeting, 50 yard rolls, 99 inches wide
Prepared Canvas, 36 inches wide

Tools Needed.—In Plate 78 are illustrated the tools commonly used for hanging fabrics. There are some variations in styles of such tools, but these are the essentials:

1 Paperhanger's Knife
1 Seam Roller
1 Smoothing Brush
1 Straightedge
1 Pasteboard and Trestles
1 Paperhangers Shears, 14 inch
1 Plumb Bob and Line
1 Paste or Calcimine Brush
1 Stepladder
1 Paste Bucket

Putting Fabrics in Place.—The principal problem in doing this work is to make one strip of fabric join up neatly with the previous strip. It is not considered necessary, nor is it possible, to so join one piece with the other so that the seam will not be visible, but there is a great difference between a neat, well made joint and a sloppy, ill-fitting joint.

One decorator will trim and butt his fabrics to make a neat joint and succeed, while others use a different method which laps the fabrics and then trims through the lapped edges. Both methods are good and both are described as follows.

Trimmed and Butted Seams.—To make butted joints carefully measure the wall from moulding to baseboard. Cut off enough strips of fabric to cover one wall. Cut each strip an inch or so too long, to allow for trimming later when pasted on the wall.

Plate 78.—The Tools Needed for Hanging Wall Fabrics.

Next place each piece of fabric on the paste board, lay the straightedge on one side and cut the fabric clean and straight with the knife. Now trim the other side edge the same way, but not the top and bottom ends. Trim each strip of fabric the same way. If your knife is very sharp no difficulty will be encountered to do this trimming correctly, provided the straightedge is held firmly in place.

Having all strips trimmed pick out one, lay it on the paste board again and take the exact measure of the width. Mark this width on the wall at the top, but do not start exactly in the left hand corner—let the fabric go around the corner half an inch or so. Now take a plumb bob and line, place the line on the pencil mark and when the line hangs still mark the bottom of the wall with a pencil. See Plate 79. Take the straightedge now and run a straight pencil line from top of the wall on your first mark down to the mark at bottom of the wall. A vertical line perfectly plumb is the object to attain. See Plate 80.

Having the wall marked where the first joint is to come, you are ready to paste up the fabric. Lay the fabric on the paste board with rough, unfilled side up. Brush on the paste with a regular paste or calcimine brush. The paste should be a little thicker than is used on wall paper. Brush on the paste freely and spread it out evenly. When the whole strip is pasted, fold it in the middle with pasted sides in together.

Where walls are smooth and in good condition, it is not necessary to paste both the walls and strips of canvas, especially when the narrower grades of canvas are being hung. It is best to paste about three strips of canvas and fold them over, then go back to the first strip and apply a second coat of paste. This will permit the canvas to soften and become pliable. When the first strip is hung, paste the second strip again and hang it. Then treat the third strip in the same way.

Plate 79.—Showing How a Plumb-Bob and Line Are Used to Mark a Vertical Line on the Wall.

When all three strips are hung, paste three more, pasting each strip twice before hanging. If canvas is hung this way, you will have no trouble with blisters or wrinkles. When the very wide grades of canvas are to be hung, it is best to paste both the walls and the canvas,

Plate 80.—The Straightedge and How It Is Used.

allowing the canvas to become soft before applying it.

The point of beginning to hang canvas may be either in the right hand or left hand corner. It is well to begin in the corner next to the window and work progressively away from the light.

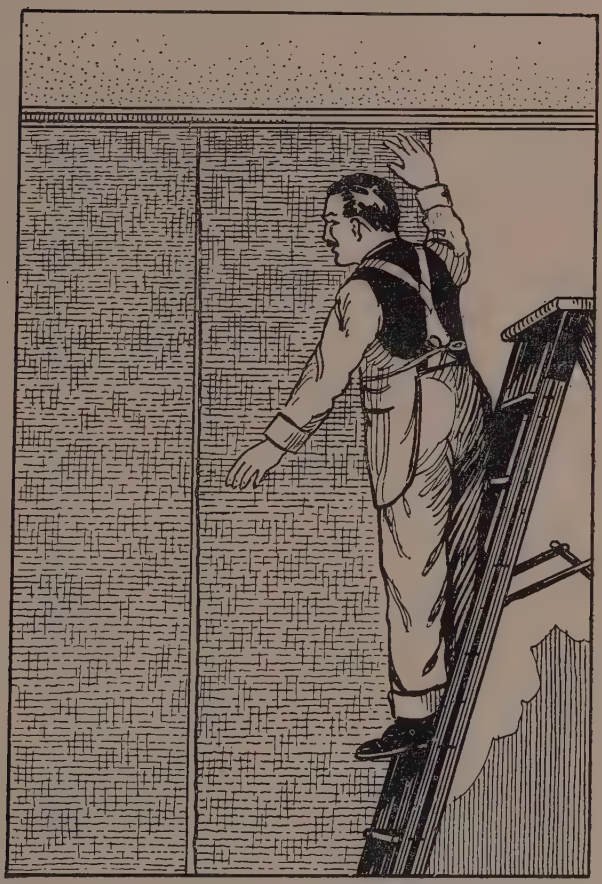


Plate 81.—Hanging a Strip of Canvas.

Carry the pasted fabric to the wall and with a step ladder get into position to unfold and drop the folded half of the fabric down. Note Plate 81.

Hold it with the right hand and peel off the back half of the fabric with the left hand. Having the fab-

ric unfolded begin by pressing the top edge to the wall close to the picture moulding so there will be a little edge to trim from the top—about one-quarter inch. Be careful to locate the left hand edge of the fabric exactly on the vertical pencil mark made on the wall in the corner. See Plate 81.

The fabric may be pressed against the wall with your hands to get a start and then having it in position use a regular paperhanger's smoothing brush with strokes from side to side and up and down, being careful always to have the edge of the fabric follow the pencil line on the left exactly. Brush out all of the bubbles, bumps and wrinkles and you may have to use the brush like a hammer to do this in some places. If any wrinkles are formed on the fabric you must pull the cloth loose and smooth it down again.

Ordinarily no paste is put upon the wall itself, but when the wall is unusually rough or absorbent a thin coat of paste should be brushed on to the wall in addition to the paste which is put on to the fabric.

When you have finished making the first strip smooth, it will lap over the picture moulding at the top and the baseboard at the bottom about a half inch or so. The next step is to paste up the second strip of fabric in the same manner as the first one.

Now measure carefully the width of the second strip of fabric at the top and bottom and mark this measure on the wall with a pencil and straightedge just as you did the first line, in order that you may have a perfectly straight line to which to paste the right hand edge of the fabric. After you have had quite some experience you will not have to place more than the first line on the wall.

Place the second strip in position on the wall in exactly the same manner as the first strip, being careful to butt the left hand edge of the second fabric to the right hand edge of the first fabric. With your fingers

you can work the cloth into a perfect joint. Now smooth the second strip of fabric with the brush as before and when it is all in place take a seam roller such as is indicated in the Plate 78 and roll down the edges of both strips. If the fabric seems to have parted at the joint you can work it together with the fingers and by pounding it with the smoothing brush.

Your third piece of fabric should be handled in exactly the same manner, first marking the line on the wall because you will need it. More than likely you will have stretched the wet fabric a little and that will make an uneven edge on the right side unless you have the pencil line to follow as a guide.

When all strips have been placed on the wall, smoothed up in good shape and the joints butted firmly into place, take the paperhanger's knife, shown in Plate 78, and trim off the excess fabric at the top and bottom of the wall so that it will fit neatly close up to the mouldings.

If any wrinkles occur after you have smoothed the fabric out once they can be worked out smooth with a sponge dampened in water and with the smoothing brush.

Any paste which has been smeared on to the fabric or wood trim should now be washed off and loose threads from ravels should be cut off. After the paste has become dry, if any of the seams have opened up they should be filled with putty made by mixing a little white lead in oil paste with dry whiting and Japan drier. When the putty has been inserted and made smooth it is a good plan to stipple it with a brush to give it a rough texture like the fabric. It is worth while to carefully inspect a fabric covered wall after the paste has become dry. Any little patching at this time greatly improves the finshed job.

When the fabric being put on is of the dyed or colored type, which is not to be painted or stained, greater

care must be taken to make perfectly butted joints and to avoid smearing of paint on to the surface. If the surface becomes spotted from handling it may be necessary to brush on a thin coat of stain of the same color as the fabric. Any putty which is used to fill up defects must, of course, be colored with dry colors to match the fabric in color.

Lapped Seams.—The second method used to secure perfectly matched joints in fabrics is really better because it eliminates all uncertainty as to the result. This method is like the one just described, except that it is not necessary to place pencil marks on the wall after the first one is placed to make sure that the seams are perfectly plumb with the corners, also with the exception that it is not necessary to trim the right and left hand edges of the fabric before placing it on the wall.

Simply cut the strips of fabric to the proper length as described before and paste the first one in position, being careful to have the left hand edge follow the pencil mark accurately.

When the first strip has been securely fastened to the wall and smoothed out, paste up the second strip of fabric and put it in position on the wall so that the left hand edge will lap over the right hand edge of the previous strip. The two fabric strips should lap about one inch. Carefully smooth up the second strip and smooth the edges down as you did the first one.

Next, take a straightedge, 6 feet or more long, and place it on the seam ½ inch from the lapped edges of the fabric. Push the straightedge to the top up next to the moulding, press it firmly against the fabric and with the sharp paperhanger's knife cut through both thicknesses of fabric, drawing the knife from top to bottom along the straightedge. Then, slide the straightedge down to the bottom, keeping ½ inch from the edge of the fabric, and continue the cutting to the bottom of the wall.

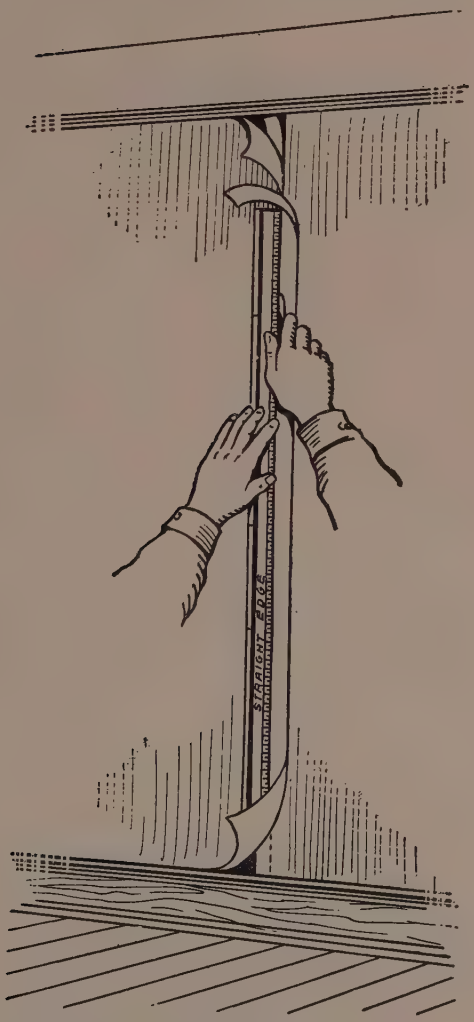


Plate 82.—Trimming Lapped Edges of Fabric. Cutting Through the Lapped Edges to Make a Perfect Joint.

Now lift the straightedge off and peel back the fabric so that you can remove the loose end under the lapped fabric which is below the seam. When you have removed both strips of the fabric edges cut off as per Plate 82, paste back both edges using the smoothing brush and the seam roller and a perfectly butted joint will result.

When handling some types of wall fabrics you will find that a perfect joint has been made while the paste is wet but when the fabric has become thoroughly dry it has shrunk enough to open up the seam. With these materials it is necessary to paste on the fabric and lap the edges as usual, but do not cut through the edges until the paste is dry. Before cutting through the lapped edges, which were not pasted down, peel them back a little and apply fresh paste, smooth them down and proceed with the cutting. By handling the fabric in this manner the seams do not open up.

The Filling of Fabrics.—Some of the fabrics sold for wall coverings are filled by the manufacturer, but on the other hand unfilled sheeting is usually used for this purpose. The unfilled fabrics are handled in the same manner as has just been described, but when it comes to decorating the fabric more paint coats are required.

Fabrics of coarse weaves, like unfilled burlap, require a thick mixture for filling and such a mixture may be made after the following formula. The fabric should, of course, be pasted on to the wall; the defects should be filled and the whole job should be thoroughly dry before any filling is put on:

2 lbs. high class glue
15 lbs. fine gilders' bolted dry whiting
Water enough to make a 5 gal. batch

A coat of boiled linseed oil should be brushed on to the filled surface when the filler is thoroughly dry.

The glue should be soaked in a gallon of hot water, preferably over night, and the dry whiting should then be stirred into the water a little at a time. Beat up the paste well to eliminate lumps before adding the whole amount of water needed. This filler should be brushed on and allowed to dry hard.

A good filler for unfilled muslin may be mixed this way:

12½ lbs. white lead in oil
10 lbs. dry gilders' bolted whiting
½ pt. Japan drier
1½ to 2 gals. boiled linseed oil

When thoroughly mixed this filler should be thinned with turpentine only to a consistency which will allow easy spreading to make a smooth job on the fabric. The filling should, of course, be done after the fabric has been put into place on the wall. Sometimes it is desirable to have the weave of the fabric texture show naturally, and it is not desirable to fill up and make a level surface. In this case the only filler required before painting is a coat of glue size mixed a little stronger than is commonly done for plaster walls as described in Chapter V. Brush the size on when the fabric has become thoroughly dry after being pasted down.

Prepared fabrics require no filling as mentioned above since the manufacturer did the filling of the cloth.

As a rule, thin coats of very finely ground paints are preferred for painting fabric covered walls because such paint colors the surface uniformly but does not fill up the texture and weave of the cloth, which ought to be preserved.

Having fabrics securely fastened to the walls and filled, either by manufacturer or decorator, the finishing process is the same as for painting, staining or enameling any other wall. Two coats of paint mixed to dry

flat with a coat of size in between the paint coats are usually sufficient to make a good job.

Repairs on Fabric Surfaces.—Occasionally canvas or other fabric will let go its hold on ceilings and bag in patches a foot or two in diameter. This may result from wet plaster or other causes. Such a defect can be remedied by cutting through the canvas as indicated by Plate 83.

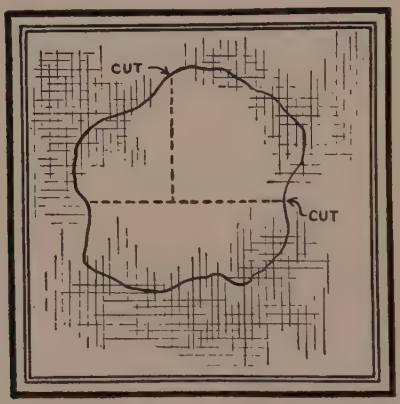


Plate 83.—Showing How to Cut Through Old Fabric on a Ceiling or a Wall to Paste Back Loose Areas.

When this cutting is neatly done the canvas may be pasted back and when dry an extra coat of paint or two over the cuts will usually conceal them after the whole ceiling has been repainted. When the area of loose fabric is large it is advisable to make your cuts only long enough to permit you to work fresh paste well under the loose fabric on all sides. In other words, it is not necessary to make your cuts long enough to peel back all of the loose fabric.

CHAPTER XIX

DECORATIVE WALL PANELS

Of the two types of wall panels in use today only one holds much of interest for the decorator. Those panel effects constructed of solid and veneer wood are essentially within the province of the lumber mill for the building. They are erected by carpenters, of course, and the decorator is concerned only with their finishing with stain, varnish, enamel or paint.

The other type of panels, however, constitute strictly decorators' work. This type is constructed by nailing mouldings on to plain plaster and wall board walls. That calls for a considerable measure of skill in layout and design in order to locate the panels artistically, to secure good proportion and interesting sizes and shapes.

Panels are also formed on walls in other ways. The mouldings are sometimes cast in plaster integral with the walls; they are cut in stone blocks as part of stone walls, they are cast in cement and they are sometimes painted flat on the plaster walls, either in plain lines or stencil designs.

The purposes served by wall panels are, principally, these: They produce valuable decorative effects; they supply variety for interiors which are severely plain and monotonous; they give opportunity for more colorful treatment within panels; they offer the means for correcting defective proportions of rooms with ceilings

too high or too low; they unite architectural features of a room and the wood trim with the wall decorative treatment.

The use of wall panels is by no means a modern treatment. As with a great many modern customs the use of wall panels is traced back to early civilization in Egypt. The decorators of Egypt divided the walls of the buildings of their time into panels and filled these panels with their queer picture words in vivid painted colors. Wall panels were their books in which historical and religious writings were recorded.

Later civilizations in Greece and Rome utilized walls more for decorative effects. They were likewise divided into panels and it is probable that their custom marked the beginning of our habit of dividing walls into friezes, filling and dado with mouldings. The panels of these early decorators were filled with scenic paintings in bright colors or with uncolored human and animal figures painted or modeled in relief.

Tracing panels further we find ten centuries later, during the Italian Renaissance, that the painted panel walls were revived. Pictorial, scenic and conventional classic ornamentation all were revived in frieze, filling and dado as well as in vertical and horizontal shapes.

When the spirit of the Renaissance reached England a bit later the severely plain walls of baronial halls were paneled ceiling high in solid oak panels shaped in squares, rectangles, diamonds and ovals. When time progressed into the Jacobean period of decoration the panels continued, but were also made of other woods and painted colorfully in grays, blues and greens.

Between the Italian and English renaissances France was influenced both ways in modes of decoration, but the paneled wall persisted. The Louis XIV and XV periods made lavish use of panels the centers of which were filled with colorful pictorials and rich tapestries,

many of which were the works of master artists. Oval, rectangular and square panel shapes were used.

The panel mouldings of these French periods were ornate, indeed. Instead of the plain and simple, moderately carved mouldings of this day the decorators of the Louis XV period used mouldings made up of profuse turnings and carvings finished in gold and highly colored in keeping with the elaborate oil paintings of the panels.

In England a little later we note a change from solid wood panels to plaster walls and then the Adam brothers, architects, interior decorators and furniture designers made popular the construction of wall panels with narrow mouldings on plaster, just such panels as we employ today.

All during these historic periods paneled walls were for the favored few, the rich privileged classes. And even until the last few years the dignity and beauty of paneled walls have been associated with expensive, pretentious homes and public buildings. Now they are easily within reach and are being extensively used to beautify average homes at moderate cost.

Paneled walls are essentially formal. They are most suitable for large rooms and those of moderate size like the modern living room. Although with more careful handling small bed rooms are paneled with a grace and charm impossible of attainment by other decorative treatments.

Plain and simple mouldings as well as colorings find most favor today in wall panels. The extravagant, luxurious treatments of the French early periods are not at all acceptable, unless for an occasional novelty room or for special effects. We have come to regard all wall decorative treatments as merely background for settings of furniture and accessories. Therefore, panels are strictly limited in pattern, texture and colorings

to what constitutes an artistic background. Restrained, subdued treatments only are in order.

WORKING METHODS

No great skill at doing carpenter work is required for cutting, fitting and attaching wood mouldings to plaster walls. The habit of careful, painstaking workmanship which is characteristic of good decorators who carry numerous other processes to a successful conclusion, will suffice to assure success here, when the correct tools, materials and methods are employed.

Decorative Mouldings.—Ordinary picture mouldings are not usually suitable for constructing wall panels because they have one edge rabbited out to receive the glass.

Practically all decorators' supply houses now carry panel mouldings made especially for this purpose—and also local lumber mills carry suitable moulding stocks.

Some of these mouldings are sold having the finish on them—such finishes as gilded, natural pine, stained oak, walnut and mahogany, white and old ivory enamel and polychrome finishes in various color schemes. Most of the panel mouldings used, however, are made of selected bass wood and are not finished when purchased by the decorator.

In Plate 84 are shown the shapes and sizes of panel mouldings commonly used. Mouldings are sold at a few cents per foot and come in strips of varying lengths.

Panel mouldings are usually cut and joined with square corners, but for certain decorative effects corners with irregular shapes can be purchased already cut and joined in corner sections. Such corners are shown in Plate 85.

Decorators commonly remodel rooms to a greater extent than by constructing paneled walls. Cornices are added where the wall joins the ceiling in some rooms,

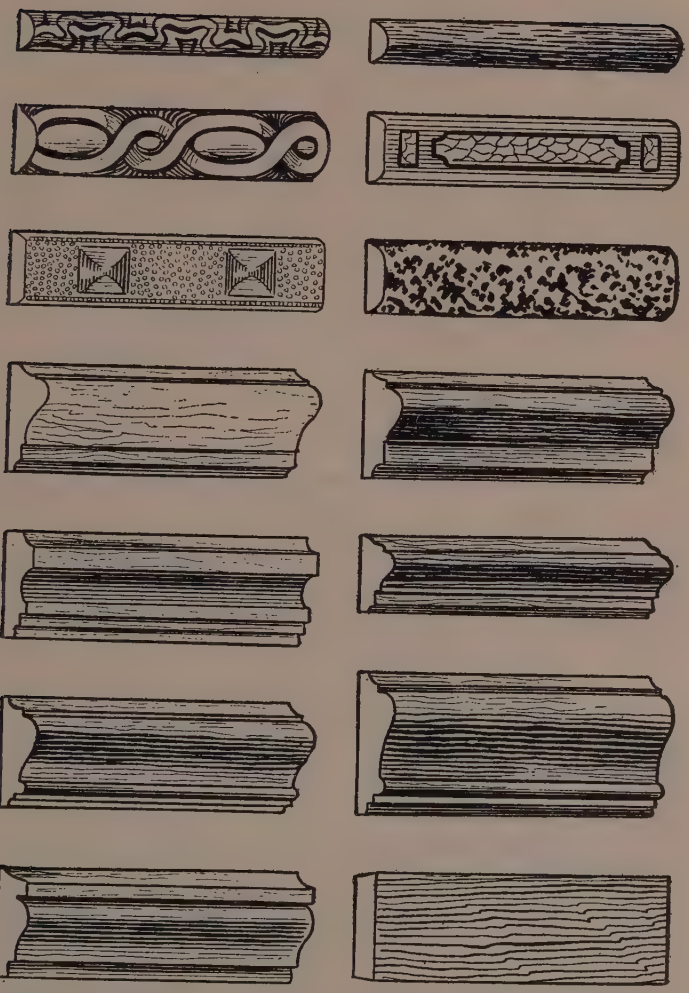


Plate 84.—The Various Styles of Mouldings Used for Constructing Wall Panels.

while in others combination cove and picture moulding, or plate rails, or chair rails are put in place. The mouldings for this purpose are pictured in Plate 86.

Tools Needed.—In addition to the usual decorators' brushes and tools required for hanging canvas as listed in Chapter XVIII, the tools needed for panel moulding work are those pictured in Plate 87, a wood or metal

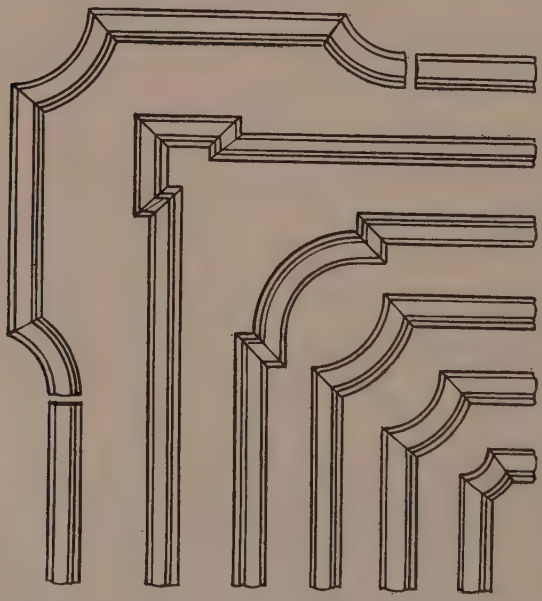


Plate 85.—Decorative Corners for Panel Mouldings.

miter box, a good hammer, block plane, carpenters' chisel and a nail set.

Where Panels Are Used.—Any room of suitable size may be paneled effectively, but those most commonly decorated in this manner are dining rooms, living rooms, halls, bed rooms and libraries. Large public buildings as a rule have many rooms which can only be effectively decorated after panel treatment.

Panels are constructed on smooth plaster walls which when old ought first to be repaired and patched to smooth up rough places, fill cracks and holes and sandpaper down any ridges.

Very often rooms to be paneled are much more effectively decorated if the electric light fixtures are first moved to new locations between panels as was done in

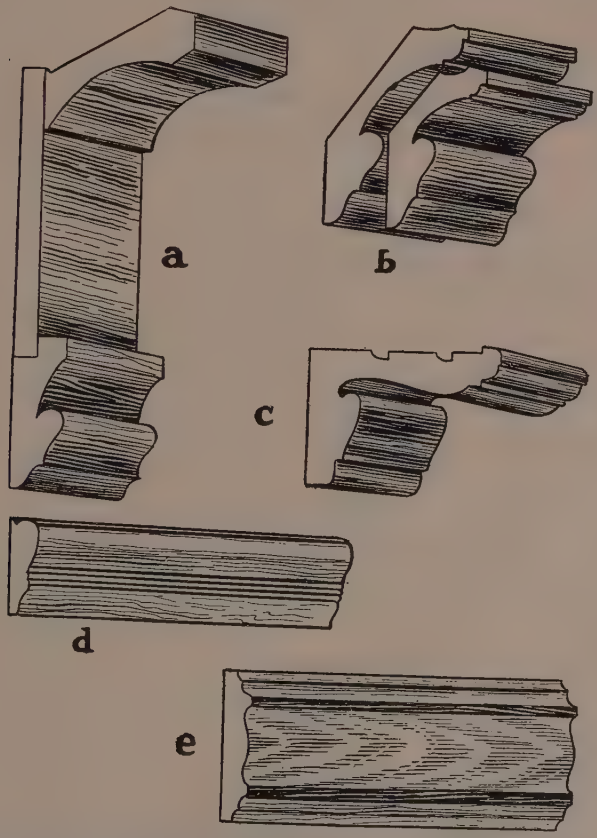


Plate 86.—(a) Colonial Cornice and Picture Moulding. (b) Combination Cove and Picture Moulding. (c) Plate Rail. (d) Picture Moulding. (e) Chair Rail.

the room pictured in Plate 88 or eliminated entirely, being replaced by wall sockets for attaching lamp cords. And these electric sockets should be located in the wood baseboard, not in the plaster near the baseboard. It is

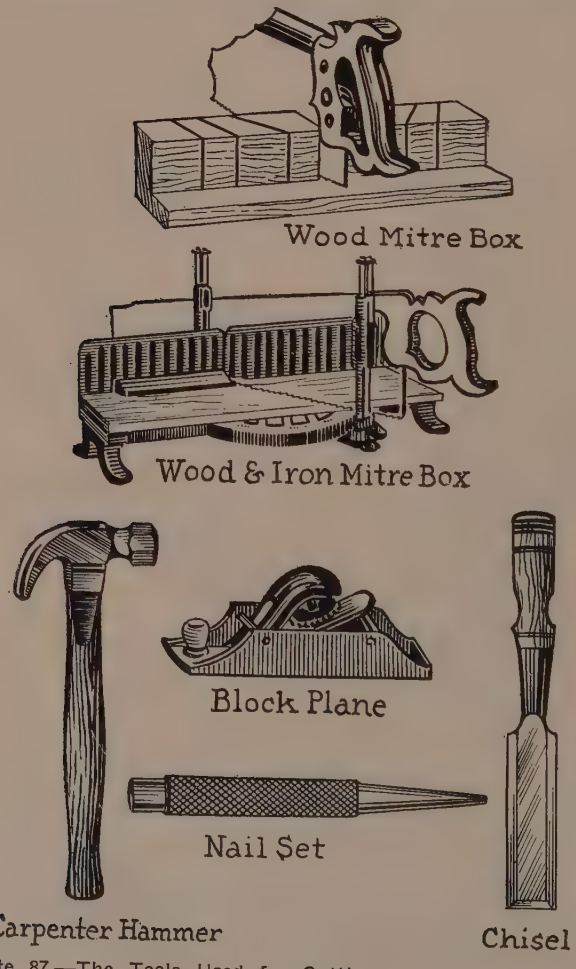


Plate 87.—The Tools Used for Cutting and Fitting Panel Mouldings.

well for the decorator to suggest this before the electrician puts them in the plaster wall. All electrical work should be done before any of the panels are constructed, because there is usually more or less patching and filling of plaster damaged by this change of fixtures.

Plate 87A.—A Spray Gun Being Used to Decorate Paneled Walls.

Having the walls repaired and in good, smooth condition, you are ready to proceed with the panels.

Laying Out Panels.—At this point in the work what is most important to the success of the job occurs. It may appear simple to decide where to put the panels,

yet it is not easy. Here is work for one of an artistic turn of mind. This is a problem in composition and design, a study of balance and proportion just as surely as the painting of a picture in oil on canvas.

Where shall the panels start? How large shall they be? What shape—square, rectangular, oval or diamond shape? Ought the windows and doors to be included or excluded? Shall we leave the ceiling a plain unbroken surface, or add at least one moulding around the outer edge? When there are built-in seats, buffets, sideboards and bookcases how shall we start the panel mouldings? In the hall ought the moulding to follow the stair stringers up?

Every room presents its own problem because the architectural arrangement of doors, windows and wood trim differs with each room. Aside from a study of composition just as the artist studies it to learn what constitutes good proportion and balance, there appears to be no way to learn how to layout wall panels in an interesting way, except a study of many rooms with paneled treatment, considerable practice and experience. To give you a start toward this study you will find examples of good panel layouts in Plates 88 to 100.

When you have a room to panel take a chair and seat yourself in the door entering the room to study the architectural effect. When you have this impression clearly, do the same thing from the center and opposite end of the room. Soon your ideas will shape and the point of beginning will come to you. There will always be a choice to make of two or three panel layout plans, and there is ample room to exercise good judgment.

Some of the facts to keep in mind while making your decision are these:

A large plain wall can be made to appear smaller by breaking it up with panels,—and to appear more interesting as well.

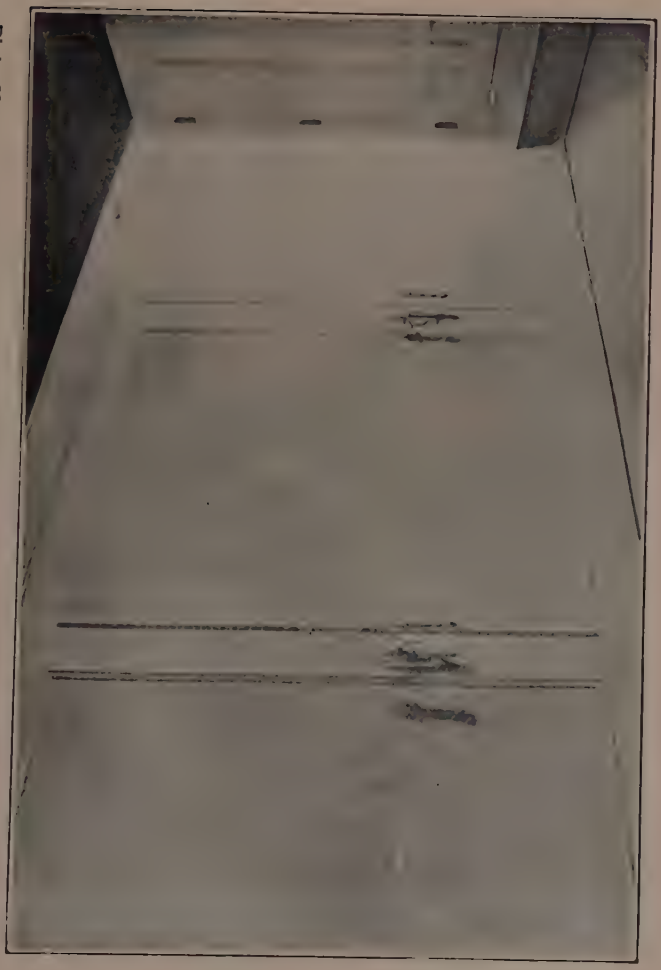


Plate 88.—Paneled Walls of a Bedroom Showing Light Fixtures Relocated Between Panels.

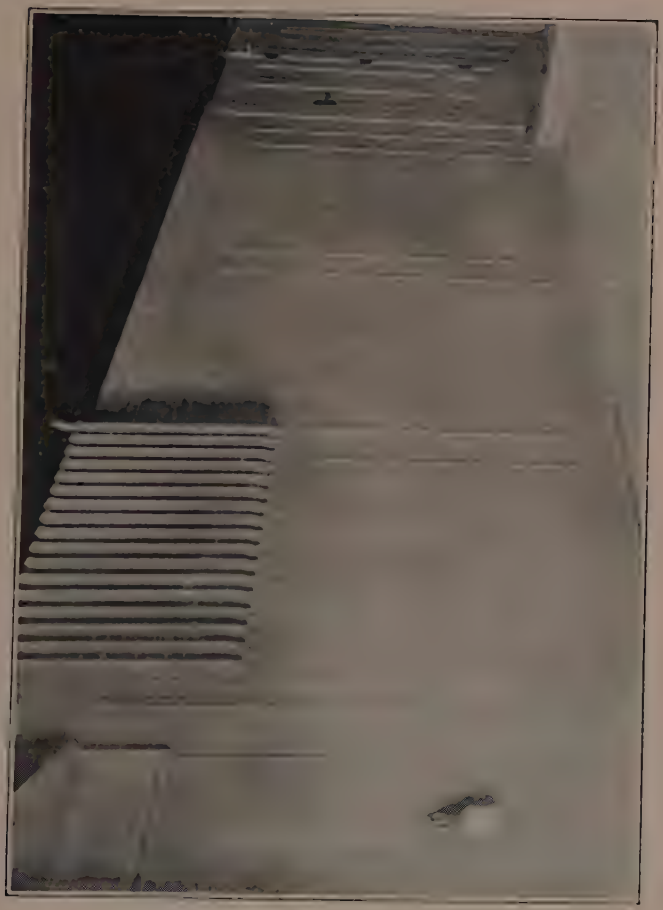


Plate 89.—An Attractive Layout of Panel Mouldings in a Bedroom.

A number of small panels tend to make a room appear larger; a few large panels tend to decrease the apparent size of a room.

Rooms with very high ceilings will usually look better if panels of rectangular shape and when the long side of the panels parallel the floor. A picture moulding placed about eighteen or twenty-four inches down from the ceiling to form a frieze will lower the appearance of the ceiling. The panels may then be run up to near the picture moulding as a stopping point, rather than up near the juncture of ceiling and wall.

Rooms with very low ceilings can be made to appear better by the use of narrow, verticle panels which run up to near the ceiling.

From among the many problems encountered in layout work for paneling mention of two or three will suffice to indicate the method of working out the problems.

Plate 89 pictures a bedroom in an average home. It was decorated in wall paper with golden oak wood trim until recently. The paper was stripped off, mouldings put in place, canvas was put on between panels and a rough texture, glazed wall finish was done within the panels.

On the wall pictured two problems were encountered. First, how was the panel near the door to be handled? Second, how could the built-in seat in the lower right hand corner be treated with reference to the panel? Note that the decorator eliminated the second problem first by starting one panel on the corner of the seat. Next he measured the length of wall between that first moulding and the door on the left. Dividing that space into four panels of the same size, he placed the door in the center of the fourth panel. That settled the door problem, but left a small wall area about eighteen inches wide between the door and corner. This he filled with a narrow panel only about six inches wide, but

as high as the four large ones. A nicely balanced wall panel treatment is the result.

On the opposite wall in this bedroom the problem was a window. A large panel was worked out, about the same size as those on the wall in the picture, so that the window was centered in it without breaking through the top panel moulding.

Sometimes it is necessary to allow some architectural feature of wood trim, column or pilaster to break through the top panel moulding, but this should be avoided if possible by your layout; that is, lay out the panels, if possible, so that one panel begins on each side of the pilaster and so the pilaster runs between panels not through a panel. Allowing some architectural feature to break through a bottom panel moulding interferes less with the continuity of the panel. Plate 100 shows the correct and incorrect layout method where doors, windows, pilasters and built-in furniture are part of the problem.

In this connection note Plate 90. A picture of a dining room in an apartment building. Within the panels a beautiful wallpaper pattern in gray and blue was placed. Between panels the wall was covered with canvas and enameled the same as the wood trim. Note that the moulding above dividing the upper wall to form a frieze was placed exactly on the level of the top door casing, not above or below this line.

Mark also the manner of laying out the panels around the built-in buffet;—the long panel above unlike any other in the room yet in harmony, the panels on each side and in the corner back of the door all are of different widths, but the same height and in harmony.

Marking Guide Lines.—When you have a clear idea of how you are going to lay out the wall panels the next operation is to mark out with a pencil on the walls the position of each panel and moulding.

Measure the first wall from corner to corner. Then

Plate 90.—Dining Room Walls Paneled Off with Mouldings. The Panel Centers Filled In with Wallpaper.

Pate 91.—A Suggested Layout for Wall Panels.

Plate 92.—Showing the Manner In Which Wall Panels May Be Artistically Grouped.

if three panels of equal width are to be placed on the wall divide the length from corner to corner in inches by three. That will give you the measure in inches for marking the centers of the margin or stile between panels.

Now you must decide how wide a margin or stile you are going to allow between panels—eight, ten or twelve inches; possibly more or less. If you decide

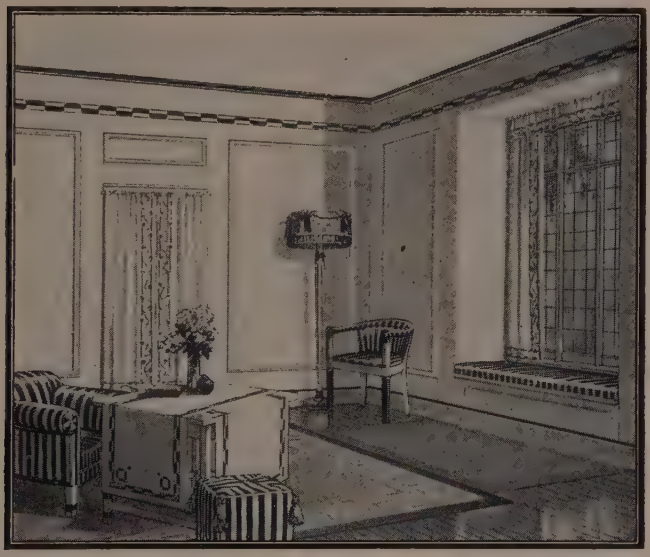


Plate 93.—A Novelty Layout of Wall Panels in a Black and White Room.

on eight-inch margins, measure eight inches each way from the first marks made to divide the whole wall into three equal parts and you have marked the position of the moulding outside edge. Measure eight inches out from each corner to get the position of the moulding on each end.

Having all the vertical mouldings marked in pencil, as to location, take a plumb line and bob; hang it from

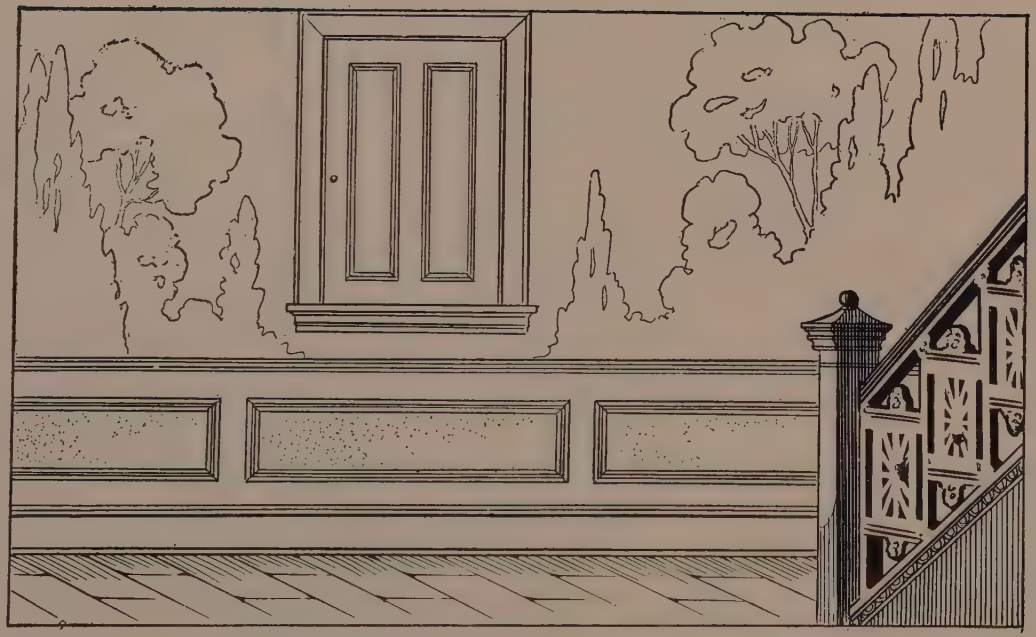


Plate 94.—A Simple but Effective Wall Panel Layout Below a Chair Rail and Having Pictorial Wallpaper Above the Panels.

Plate 95.—A Living Room Paneled in Conventional Style.

Plate 96.—Another Arrangement of Panels on Living Room Walls.

Plate 97.—An Interesting Layout of Wall Panels Produced with Mouldings and Wallpaper Centers in a Living Room.

Plate 98.—A Layout for the Handling of Wall Panels in a Second-Story Bedroom.

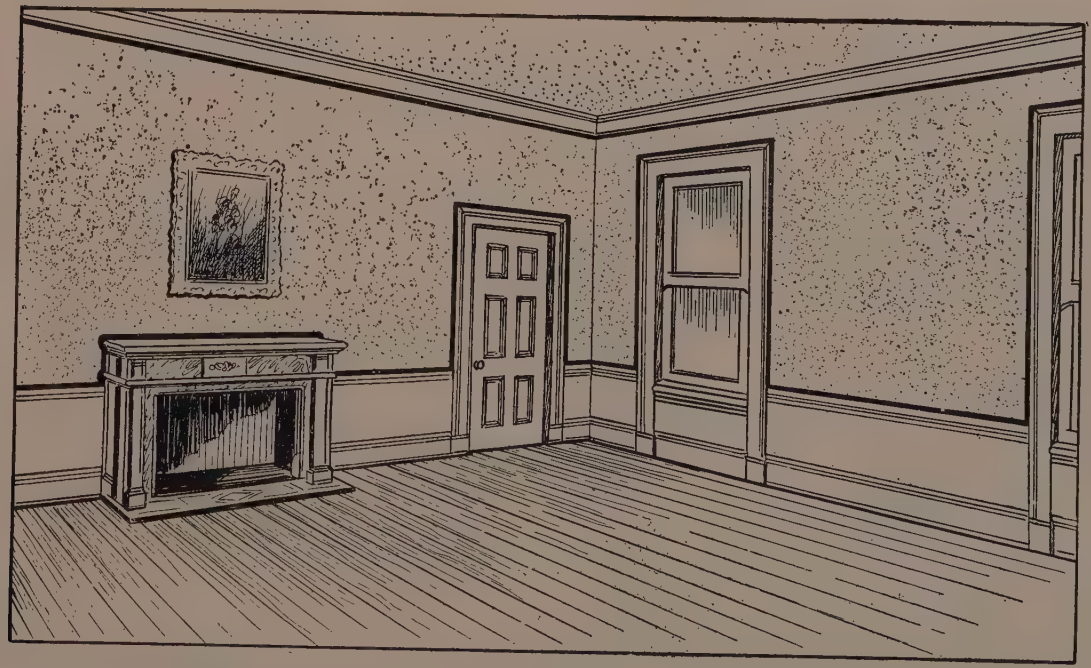


Plate 99.—A Very Modern Use of Mouldings. The Mouldings Are Finished in a Very Dark Color and Located Just Below the Cornice Above the Chair Rail and Follow Around the Door Casings.

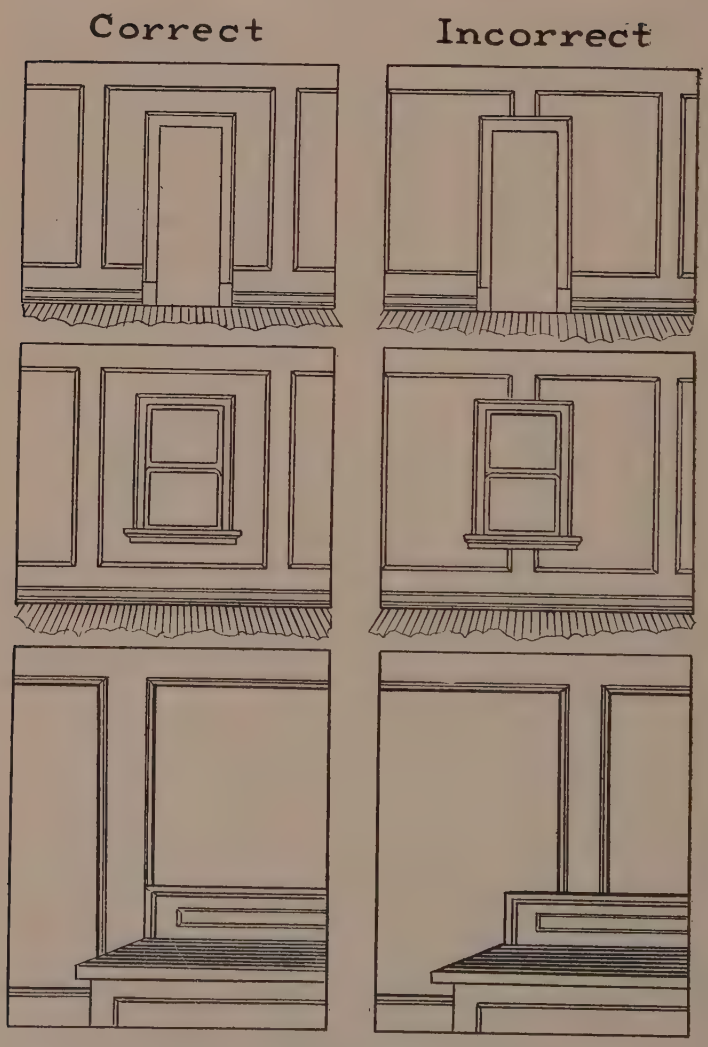


Plate 100.—Indicating Some Correct and Incorrect Layouts for Panel Mouldings.

a nail so the line will exactly cover each mark and one at a time make a mark at the top of the wall to correspond with the bottom mark. See Plate 79, Chapter XVIII, for the use of this tool.

With two sets of marks—top and bottom—on the wall take a straightedge and run straight lines from top marks to bottom marks. See Plate 80, Chapter XVIII, for the use of the straightedge.

To locate the top moulding measure down from the ceiling or bottom of the cornice, cove or picture mould eight inches. Mark both ends this way and have several marks in between so you can run straight lines with the straight edge on top of such marks.

To locate the bottom margin make your marks in the same way eight inches above the baseboard and run a straight line with your straightedge as before.

Attaching the Mouldings.—With the panels accurately marked off in pencil the cutting of mouldings comes next.

The three things necessary to the making of perfect corners are a sharp saw, an accurate miter box and great care in the use of these tools to assure clean, sharp and accurate miters.

Have a sharp pencil with an ordinary size lead—not the thick lead. Take a piece of moulding, lay it flat in the miter box. Hold it firmly in the corner and saw it off after placing the miter to make a 45-degree cut near the end of the moulding. Note Plate 101.

After the first cut place the moulding itself on the wall and accurately mark the length from top line to bottom line. Make your cut on the other end, being certain to cut so that the outside of the moulding is the long side. If the first moulding is right in length, cut five more exactly like it.

It is well now to put a four penny finishing nail in each end of each moulding and tack them all in place firmly enough to remain there.

Now cut one end of another moulding clean and make your measure on it for the top position. Better allow it to cut a trifle too long than too short—a second cut can be taken to just shave off a little wood if the first cut doesn't fit.

When you have made a perfect top moulding cut five more just like it in length. Tack all in place and

Plate 101.—The Miter Box Being Used to Miter the Corner of a Moulding.

as rapidly as each corner can be made to join up perfectly drive the nails home, taking care not to hit and bruise the moulding with the hammer.

After all mouldings are securely fastened by a four-penny nail every foot or so, go over the mouldings again and drive all nail heads a little below the surface with a hammer and nail set.

If the miter and saw have been correctly and care-

fully handled the joints will fit perfectly. Slight burrs or imperfections may be trimmed off with a sharp wood chisel, sandpaper or a file.

Having all mouldings nailed securely in place, proceed to repair any holes, cracks and bruises in the plaster as per Chapter IV. Then spread on a coat of paint, taking care to work the paint well into nail holes, corner joints and all openings.

When the paint is dry putty up all holes and cracks and let the putty dry.

The margins between and around panels are now usually covered with canvas as per Chapter XVIII.

After the canvas the moulding and canvas are painted or enameled. In some cases the moulding is stained and varnished or enameled before being attached to the wall because it may be handled much more quickly without the necessity for cutting sharp edges as when staining after erection.

Sometimes the mouldings are painted one or two coats with the canvas and then are given a coat of gold, silver, copper or other bronze.

Glazing and Highlighting.—Whether the moulding is painted, enameled or gilded with bronze, the finishing touch given usually is a thin coat of glazing color as described in Chapter X. This transparent color is brushed on and stippled with a brush, wad of cloth, wad of newspaper or a sponge; then while the glaze is still wet a small wad of clean cloth is rubbed over the moulding to wipe out high lights or give an antique effect. The glaze color is thus removed from the high surfaces and allowed to remain in the low or depressed cracks and crevices.

The Antique Finish.—When the glaze coat has been wiped and is dry, a further antique finish is sometimes added by brushing on a coat of rottenstone mixed thin with turpentine. This coat, too, is wiped off all except the depressions and crevices.

Polychrome Finish.—The glazing with bright colors and antique finish over bronze ground coats is very effective. This is, of course, what is popularly called polychrome finish. The bronze grounds are made from bronze powders mixed with bronzing liquid as per Chapter XIV. The glazing colors to go over the bronze ground are described in Chapter X and used in the same manner as there described for glazing, mottling and blending.

Panel Centers.—Often the centers of the panels are given identically the same treatment as the margins between panels and the mouldings. When this is true the entire wall is covered with canvas as a rule *before* the mouldings are put in place. Then the painting or enameling proceeds as for any unpaneled wall.

A popular decorative treatment for panel centers is the use of one of the colorful glazed, mottled, blended, sponge stippled or spatter finishes described in Chapters X, XI, XII, XIII, XVI and XVII.

Another effective treatment for panel centers is the use of one of the artistic rough textures the methods for which were given in Chapters XV. Note Plates 88 and 89.

Wallpaper is often used with striking effect in panel centers when just the right color note and suitable pattern are selected. Note Plate 90.

Fabric or paper tapestry patterns are, indeed, suitable for panel centers.

Color Schemes.—The handling of wall panel color schemes is an integral part of the color treatment of the room as a whole. And while panel centers can easily carry both stronger, brighter colors and patterns and textures of more contrast, these must be used with great discretion and as part of the whole color scheme. A restrained and subdued treatment as to color, pattern and texture is most likely to prove permanently satisfactory.

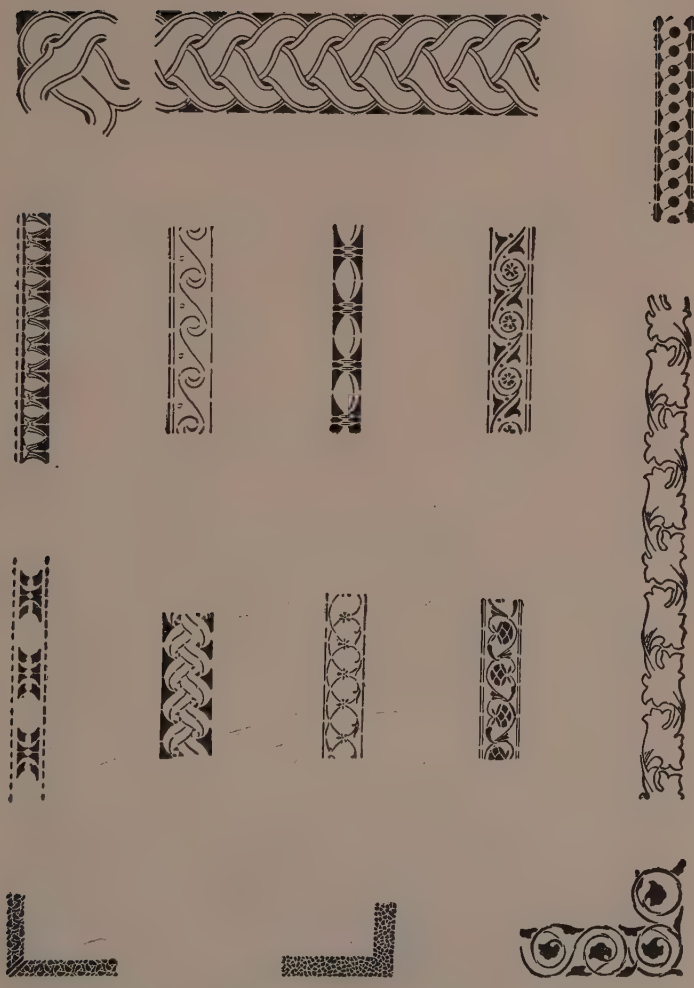


Plate 102.—Classic Stencil Design Which May Be Used to Form Wall Panels.

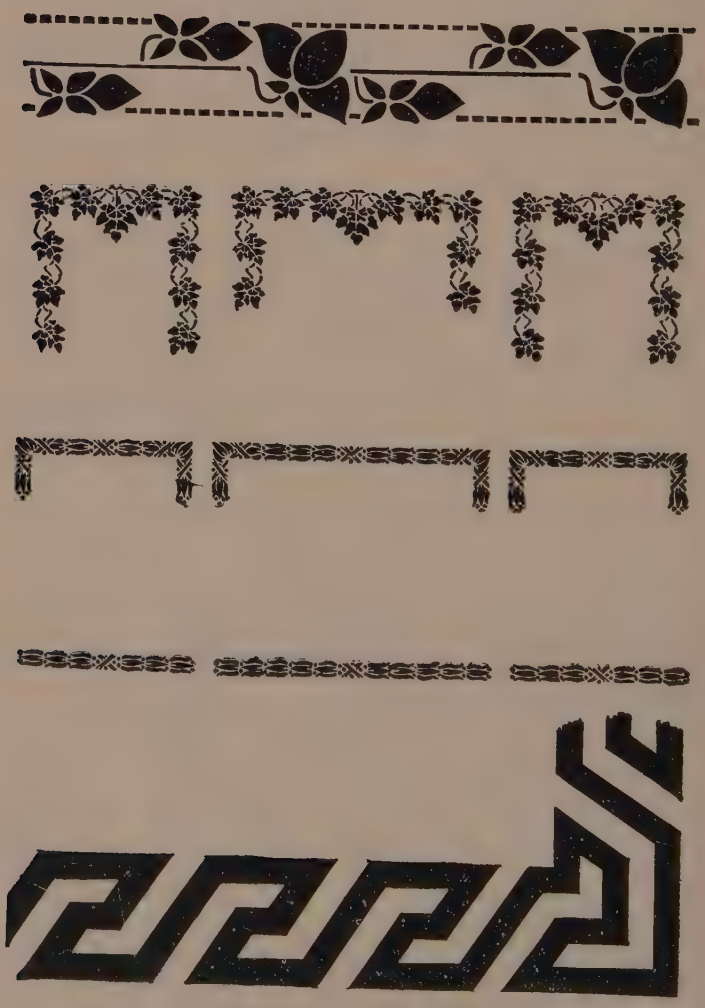


Plate 103.—Classic and Conventionalized Flower Designs Suitable for Wall Panels.

Painted-On Panels.—Without the use of mouldings panels are sometimes laid out and painted on the surface in one or more colors.

In all respects the layouts for this type of panels resemble those done with mouldings. The essential difference is that the ability to do lining and striping with a brush is required. See Chapter XX for instruction about lining.

Stencil Border Panels.—In place of raised wood mouldings or flat painted lines certain appropriate stencil border and band designs are used to form panels.

The layout of panels and the preparatory ground work are the same as for stencil panels as for others. The designs are transferred from regular paper stencils and in all respects this is a stencil job.*

In Plates 102, 103 and 104 are shown suitable designs and panel effects.

Dado, Filling and Frieze.—Walls generally have been divided for convenience in designating different areas as follows:

The Dado, meaning the lower section between the chair rail and baseboard or plate rail and baseboard.

The Filling, meaning the section between the plate rail and the picture mould or the Frieze (sometimes called the upper third or upper side wall).

The Frieze, meaning the section between the picture mould and the ceiling. When this latter section is tinted the same as the ceiling it is not called the frieze but rather a drop ceiling.

The Dado rail or plate rail undoubtedly comes from the English Victorian or pre-Victorian period while the picture mould is of much later date. The picture mould has a sound, practical reason for existence.

When the use of a frieze appears desirable and its

* Stenciling is too extensive a subject to be covered here. It is presented in considerable detail fully illustrated in the author's book, "New Stencils and Their Use."

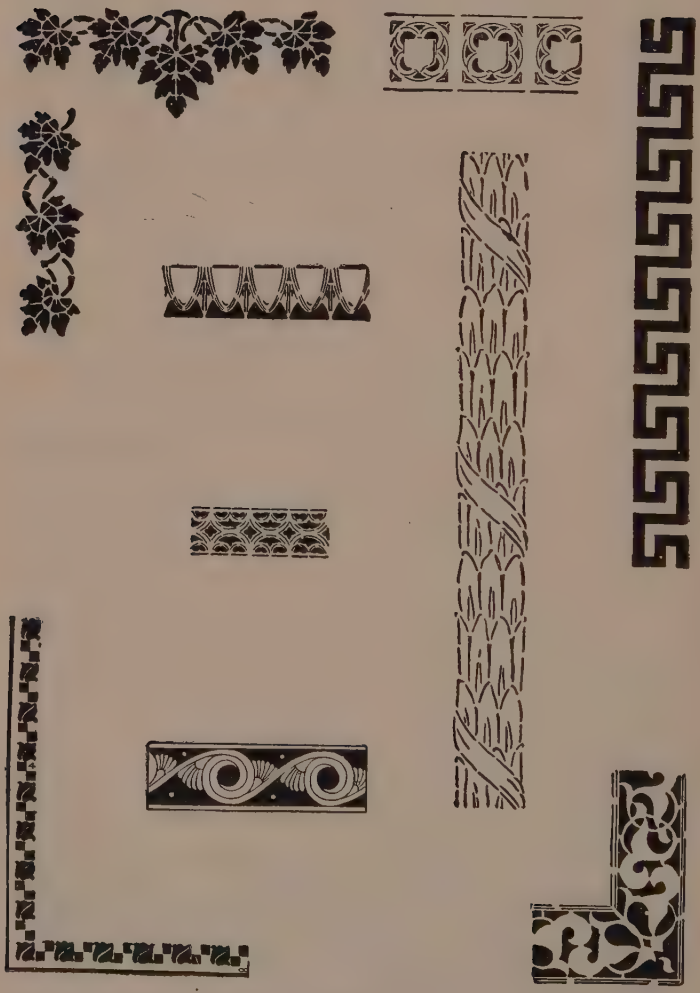


Plate 104.—Stencil Designs Suggested for Use in Forming Wall Panels.

depth is not already fixed by a picture mould it is well to start from some fixed point already present in the building—the tops of the door casings are among the first to use in this manner. A frieze coming as low as that will be deeper than usual and, of course, is desirable only with a comparatively high ceiling. With such a deep frieze a dado would be out of place; it is only

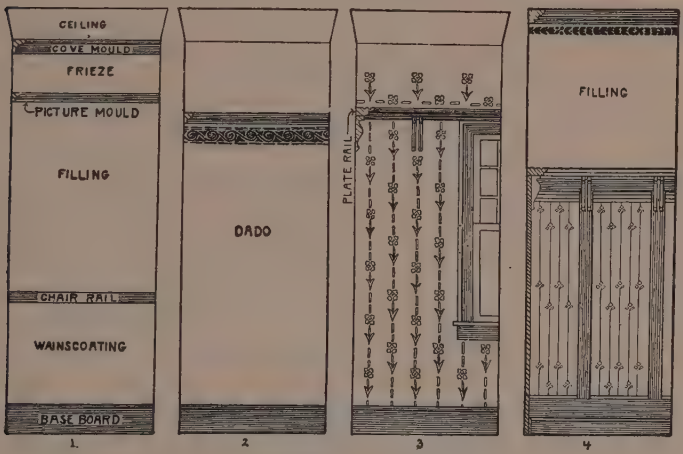


Plate 105.—Common Names Used to Designate Various Wall Areas for the Purpose of Decoration.

in a room with an unusually heigh ceiling that both a frieze and dado can be used with good effect. Such a deep frieze should be lightly handled as to color and design. If the color is too strong and the design heavy it will apparently lower the heighth of the ceiling. Use an extremely light stencil pattern lightly colored and leave a large part of the frieze plain. Note Plate 105.

CHAPTER XX

LINING AND STRIPING

To learn how to paint a straight line on walls or other surfaces is not at all difficult, but it requires quite a little practice, the correct tools and especially the correct hold on the brush.

Tools Needed.—The brushes used are called fresco angle lining brushes. They come in various sizes, but for practice the ¼-inch and ½-inch sizes are suitable. These are illustrated on Plate 106.

The other tools needed are a light-weight straightedge about three feet long and a plumb line and bob. Plate 79, Chapter XVIII.

Materials Used.—Ordinary paint or tinting colors ground in linseed oil are suitable for this lining. Thin the colors with turpentine mostly, but add enough linseed oil to cause the color to flow freely from the brush. If the lines are to dry flat and you have difficulty with colors thinned entirely with turpentine, use flatting oil with the color in place of linseed oil which will make a gloss finish, if used in considerable quantity.

The Method to Follow.—Hold the brush at the extreme end between the thumb and first two fingers. This is the only way to draw straight lines. Note this position in Plate 106.

Mark guide lines on the wall as instructed in Chapter XIX, using the plumb line and straightedge.

To run a straight line place your short straightedge

Plate 106.—(a) The Correct Way to Hold an Angle Lining Brush. (b) The Angle Liner and Straightedge in Position to Run a Line. (c) Fresco Angle Liners. (d) A Gilding Wheel. (e) A Striping and Stencil Wheel. (f) The Character of Stripes, Stencil and the Wheels Which Are Used to Make Them with a Striping Wheel.

on the guide lines and after working your brush well into the color take the correct hold on the handle and draw your line from top to bottom. Allow the metal ferrule of the brush to slide down in contact with the side of the straightedge as shown on Plate 106.

Striping and Stencil Wheels.—There is on the market a tool which is used for making single straight lines from about one-sixteenth of an inch wide to about one-quarter of an inch wide. Such a tool is pictured on Plate 106.

The tool comes equipped with nine plain and one ornamental wheel. A set of twelve extra ornamental wheels can be bought also. The plain and ornamental wheels can be used singly or in different combinations of plain and decorative wheels.

The material used in these striping wheels is one-half Japan color and one-half oil color thinned with turpentine to flow freely.

The striping wheel can be used with a straightedge to make clean and sharp lines on any surface which can be painted. It can also be used to apply gold size in stripes. Then gold leaf or silver leaf can be applied by hand to make gold or silver stripes.

Another tool similar to the striping wheel just described is called the Coe's adjustable gilding wheel. This tool lays a ribbon of gold leaf with accuracy. The ribbon may be any width from 1/16 to 1¼ inches.

The gold leaf comes on spools, containing sixty-nine feet of 22½ karat quality. Nine different widths are available.

INDEX

PAGE

Aluminum paint 236
Antique Italian finish....189

Balancing a color scheme. 30
Bank, school and church color schemes..... 40
Bedroom colors..... 39
Binders for calcimine.....118
Blends, graduated.....173
Brick walls 63
Bronze finishes, metallic..233
Bronze paints, mixing....235
powders 233
Bronzes, using dry.....238
Bronzing liquids.....234
Brushed rough wall textures 310
textures 298
Brushes, types of wall... 94
Brushing calcimine.....124
methods 96

Caen stone, French.....273
Calcimine, binders for....118
brushes 125
brushing 124
colors for 118
for large surfaces.....123
methods and materials..117
mixing 121
old, removing..... 66
on new walls.....127
on old walls.....129
pigments 118
stippling on.....130
"topping over" 130
Ceiling colorings..... 48
Church, school and bank color schemes..... 40

PAGE

Cleaning radiators 133
Cleaning up before decorating 55
Climaxes and centers of interest 28
Color cards, experiment with 53
Color combinations, list of.217
Colored enamels.....115
Colors and textures, appropriateness of..... 29
Colors, decorators' glaze..146
to mix glazing.....152
for calcimine 118
for wood trim..... 46
Color schemes.....217, 436
balancing a..... 30
for the hall..... 40
suggestions, glaze 185
Colors, stencil.....342
straining 92
Color treatment.....202
Combed texture finishes...309
Compostipl 259
Concrete walls..... 63
Correlating walls, floors, trim and ceiling..... 26
Correct brushing methods. 96
Covering small surface cracks 78
Crack and hole filling.... 75
Cracks and holes, cleaning and cutting out..... 68
Cracks, covering small surface 78
Craftex, plastic paint.....253

Dado, filling and frieze...439
Decorative mouldings....408
Decorating, procedure in.. 55

PAGE
Decorative wall finishes in history 244
wall panels 405
Decorators' glaze colors...146
Decorite plastic paint....256
Dining room, the..... 36
Discolorations 80
Drapes and window shades 51
Drop cloths..... 55

Early Colonial plaster...282
Enamel on flat wall paint.115
on old plaster or canvas.114
on plaster and canvas...112
Enameling 85
Enamels, colored.....115
for walls..... 88

Fabric materials used....391
Fabric surfaces, repairs on 404
Fabrics, putting in place..392
the filling of.....402
Filling wall board joints.. 79
Filling of fabrics, the....402
Finger rough textures....310
Finish, Italian plaster....294
Roman tile.....298
Finishes, spray gun decorative 345
Finish, Spanish palm....282
Wickham palm.....289
Finishes, combed texture..309
Flat lead paint..... 87
Flat wall paint.....85, 263
Flatting oil..... 88
use of 112
Floor colors and designs.. 49
Formulas for white paint, standard 109
French Caen stone.....273

Gesso, Italian.....265
Glaze color runs, when the.169
scheme suggestions.....185
decorators' 146
Glazed effects, silk.....190
Glaze sets before blending.169

PAGE
Glazing and highlighting mouldings 435
colors, to mix.....152
in gray tones.....183
liquids 151
multicolor 170
where used 145
simple two-color.....152
to match aged effects...188
very rough walls.....174
Gloss and flat patches....107
Glue size..... 81
Graduated blends.....173
Ground coats.....150

Hall color schemes..... 40
Hanging and painting wall fabrics 389
High lights, wiping out...142
Historic and new rough wall textures.....241
Hole filling..... 75
Holes, cleaning and cutting out 68
Holland plaster wall finish.268

Italian finish, antique....189
Italian gesso.....265
plaster finish.....294

Kitchen colors..... 36
Knifing putty..... 72

Lace stencil designs.....332
making 333
wall finishes.....331
Ladders and planks..... 56
Lapped seams.....400
Lead and zinc paint, mixing 90
Lead paint..... 87
Library and private offices 38
Lining and striping.....443
Liquids, glazing.....151

Market for simple colorful textures 22
for novelty and bizarre effects 22

PAGE
Materials, prepared 85
Metallic bronze finishes..233
Mill whites..... 88
Mixing bronze paints.....235
flat wall paints..... 89
lead and zinc paint..... 90
white lead paint..... 89
Morene, plastic paint.....262
Mortar joints, marking off.274
Mottled novelty finish, a..189
Mouldings, antique finish.435
attaching 433
decorative 408
glazing and highlighting 435
Multicolor glazing.....170

North exposure color schemes 44
Novelty finish, a mottled..189

Oil and glue size..... 83
Oil, flatting..... 88
for dead flat finish, drawing the 94
Old English plaster.....281
Outline, stencil or pounce.151

Paint, flat lead..... 87
scaling 68
stipple, ground coats for.211
stippling 103
Painter-mixed materials..263
Painted-on panels 439
Painting wall fabrics.....389
Paints and colors, straining 92
Panel centers.....436
Panel mouldings, tools for.412
Panels, decorative wall...405
laying out 413
painted-on 439
stencil border.....439
where used 410
and stripes 52
Pargetry 264
Paste mixing 390
Patches, gloss and flat..107
Pictures, frames, mats.... 49

PAGE
Pigment, proportions of.. 92
calcimine 118
Plain painting and enameling 85
Plaster, early colonial....282
new rough-finish..... 61
new smooth-finish..... 59
Old English.....281
old rough-finish..... 62
old smooth-finish..... 60
of paris putty..... 74
staining rough.....141
Polychrome finish for mouldings 436
Preparation of surfaces... 59
Prepared materials..... 85
for rough wall textures.249
Procedure in decorating.. 55
Putty, first class..... 72
knifing 72
mixing and use..... 71
plaster of paris..... 74
quick-setting 73
Swedish 73, 264
window glass 72

Radiator painting and decorating 133
glazing, mottling and blending 134
Relation of walls to furnishings 25
Removing gloss oil size.. 66
old calcimine 66
old wall paper..... 65
Repairs on fabric surfaces.404
Roman tile finish.....298
Roman travertine wall finish 293
Rooms, large, color schemes 41
light and dark, color schemes 45
small, color schemes.... 42
Rough wall textures.....241

Sand-float, brushing on paint 201
color treatment 202

PAGE
ground coat.....194
mixing the rough coat..198
tools used.....201
wall finish.....193
wall finish, where to use.193
Scaffolding 56
Scaling paint..... 68
School, church and bank color schemes..... 40
Scrap-book for color cards. 54
Seams, lapped.....400
trimmed and butted....392
Silk glazed effects.....190
Size, glue..... 81
oil and glue..... 83
sugar 84
varnish 82
Smoothed textures.....298
South exposure color schemes 45
Spanish palm finish.....282
Spatter coats, the.....227
wall finish.....219
wall finish color schemes.228
wall finish, ground coats.220
Sponge-stipple, decorative effect wanted.....205
materials and tools.....206
suitable for various surfaces 206
wall finishes 205
rough textures 310
Spots, flat and gloss.....183
Spray gun decorative finishes 345
equipment 355
working methods.....356
Spray guns, types of.....354
Staining rough plaster...141
Stains and discolorations. 80
Standard formulas for white paint.....109
Starch-coating walls.....108
Stencil border panels.....439
colors 342
designs 437
fill in and wipe out.....154
or pounce outline.....151
wall finishes, lace.....331
PAGE
wheels 445
Stippaleen plastic paint...260
Stipple coat, the.....212
Stippling on calcimine....130
paint 103
tools for 184
Straining paints and colors 92
Striping 443
and stencil wheels.....445
Stuc-O-Tint plastic paint.261
Sugar size 84
Surfaces, preparation of.. 59
to decorate, kinds of...145
Swedish putty 73
formulas for 264

Textone, plastic paint....249
Textures, brushed and smoothed 298
finger rough 310
sponge-stippled rough...310
Tinting enamels.....115
Tools for rough wall finishes 267
"Topping over" calcimine.130
Trimmed and butted fabric seams 392

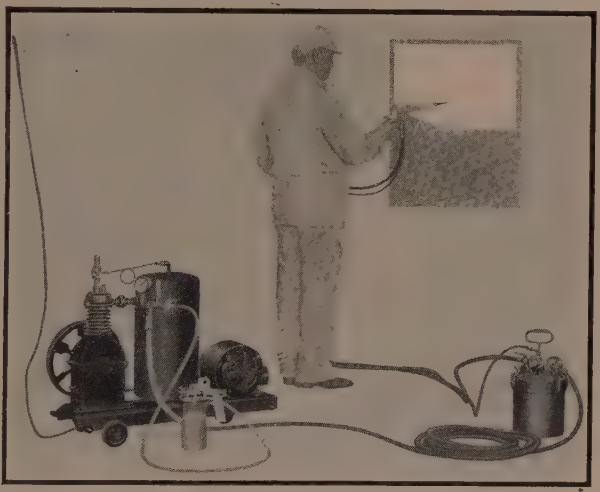
Varnish size..... 82
Vernis Martin and metallic bronze finishes 233
Vernis Martin finish.....238

Wall board joints, filling.. 79
walls, new..... 62
walls, old..... 63
Wall brushes, types of.... 94
fabrics, hanging and painting 389
Wall finish, Holland plaster 268
sand-float 193
lace stencil 331
Roman travertine 293
spatter 219
sponge-stipple 205
Wall paint, flat.....85, 263
Wall paints, mixing flat.. 89

PAGE
Wall panels, decorative...405
Wall sizing materials..... 81
Wall textures, brushed rough 310
historic 241
new rough.....241
Wall treatment, artistic... 19
Walls, concrete and brick. 63
enamels for..... 88
finishing coat, flat.....111
finishing coat, gloss....111
finishing coat, semi-flat.111
first coat 110
glazing very rough.....174
new plaster.....109
old painted 63
old plaster.....111
second coat 110
size coat 110
starch-coating 108
Washing walls and ceilings 64
Wheels, striping and stencil 445
White lead paint, mixing. 89
White paint, standard formulas for.....109
Wickham palm finish.....289
Window glass putty..... 72
Window shades 51
Wiping out high lights...142
Wood trim, colors for.... 46
Work, where to begin..... 58
Working methods, spray gun 356

Zinc and lead paint mixing 90

Complete DeVilbiss Spraying Equipment *for* Interior Wall Decoration



THE small but complete DeVilbiss Spray-painting Outfit pictured is designed especially for interior wall decoration work of every description; for bronzing radiators, painting window screens and blinds; for "colormisting" or spatter work, blending, stippling, mottling, glazing and stenciling. This Outfit is compactly put together for one man operation, and can be easily moved about. The air compressor is driven by a motor which can be connected to any electric light socket.

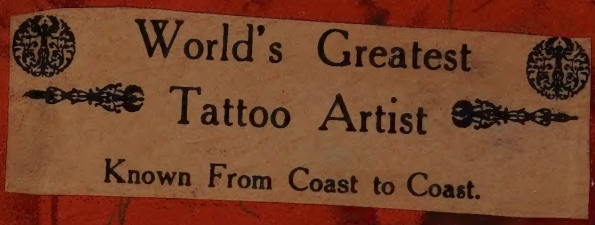
Spray-painting interior wall surfaces offers such important advantages as (1) many artistic effects impossible to obtain in any other way, (2) an improvement in quality of finishing, (3) a saving in time and labor. Further particulars will be gladly sent. Address—

The DeVilbiss Mfg. Co.

290 Phillips Ave. **Toledo, Ohio**

DeVilbiss

Spray-painting System


World's Greatest
Tattoo Artist
Known From Coast to Coast.